THE TIMES
Higher Education
SUPPLEMENT

London 'acted properly' on Willson–Auditor

by Judith Judd

The compensation paid to London University's principal, Dr Glenn Willson, on his resignation was almost certainly less than the damages the university would have incurred had it contested his claim.

This is the verdict of Sir Douglas Henley, the Comptroller and Auditor General who was asked by Mr Geoffrey Edge, MP for Brownhills to investigate a reported financial settlement of at least £40,000 made to Dr Willson.

Sir Douglas says in his reply to Mr Edge: "I am satisfied from the information available to me that the university authorities have in this matter acted properly in the exercise of their responsibility for the management of the university's affairs.

"The legal advice was that the compensation settlement negotiated with Dr Willson was almost certainly a good deal less than the potential liability for damages and legal expenses which the university might have incurred had they contested the claim; this was also the view taken by the University Court, whose members included Lord Scarman and Lord Shawcross."

Mr Edge said this week that he would be writing to Mrs Williams, Secretary of State for Education, to point out his criticisms of the university's handling of the matter.

He said: "I am not satisfied. It seems to me the university should not have paid compensation to Dr Willson and should not have been prepared to do anything more than offer him the job of the new principal."

Dr Willson resigned after a disagreement between himself and the university over his role as principal under a major revision of the university statutes. Under the revision the university will have a full-time vice-chancellor instead of a part-time one.

Mr Edge said that Dr Willson must have known about the statute revision when he was appointed. If he did not, the university should have told him.

Sir Douglas says in his letter that Dr Willson had been appointed as principal in 1975 for a term which would have run until at least 1985 with no contractual provision for any earlier termination of his employment by the university.

Dr Willson resigned in May. His resignation takes effect from September this year.

Students launch new bid to combat racism in schools

by John O'Leary

A new attempt to combat racism in schools through a change of emphasis in teacher education was being launched by the National Union of Students today.

Mr Trevor Phillips, in his first major policy speech since becoming NUS president, was expected to outline a number of proposals for promoting multi-racialism in schools when he addresses the union's teacher education conference this afternoon in Cardiff. Race will be one of the main themes of the conference, setting the tone for student campaigns in the coming year.

Two of the 12 motions for debate at the conference—the largest outside the union's full assemblies—deal with the topic. Both support the controversial policy of denying a platform in student unions to outside speakers considered racist or fascist.

NUS is committed to taking a lead in opposing racism, all the major political parties having achieved in a unanimous political effort. Mr Phillips's speech, which will also deal with the present pattern of teacher training, is expected to contain a number of proposals which he says are essential for an effective student campaign.

One section of the conference is being devoted to workshops where delegates will discuss different aspects of multi-racial education. A discussion document asserts that truancy and underachievement at school and the low number of students from ethnic minorities in post-school education all illustrate the alienation these groups feel within the education system.

The motions call for the removal of racist content from the school curriculum. One puts forward the belief that British imperial history, the contribution of non-whites during the two World Wars and other such topics, are deliberately ignored in the teaching of history in schools. Organisations or individuals deemed racist or fascist should be denied a platform in order to uphold and protect the democracy of the union, it is proposed.

Other motions oppose the closure of colleges of education and increases in tuition fees, and are critical of the reliance on birth rate projections for planning teacher education.

The question of students' teaching practice is also a major concern and seven regulations are proposed as minimum requirements which should be accepted by education authorities. These include safeguards to prevent students being failed without comprehensive assessment by a qualified examiner.



A CLEAN SWEEP: Geography graduate Mr Tim Porter set off this week on a 40-day holiday job, pushing a carpet sweeper from Land's End to John o' Groats. He was chosen from 700 applicants to walk the 913 miles for £400 and expenses. Mr Porter has been in training for this advertising gimmick since collecting his degree this summer from King's College, London.

Lower growth on CNAA courses

The number of students on CNAA-approved first degree courses at polytechnics and other courses rose by 13.5 per cent last year. This compares with a 20.3 per cent increase in 1976-77.

First-year student intakes went up by only 5.3 per cent, against 15.3 per cent the previous year, according to the CNAA's report for 1977.

CNAA says that 99,377 students were enrolled on first degree courses during 1977-78—nearly 38,000 of them on science and technology courses. There was a decline in the proportion of science and technology students, who represented 38 per cent of the total compared with 39 per cent last year and 45 per cent in 1974-75. But CNAA says this was to be expected as the number of courses in other disciplines increased.

In fact the enrolment for science and technology courses went up by 10 per cent.

Low priority applications that succeed

by Ngaio Crequer

Information on annual intakes and which universities make offers to candidates which put them at low priority is a new feature in the *latest edition of Degree Course Offers 1978/9* published today.

This year's edition sub-titled "Winning Your Place at University, Polytechnic and other Institutions of Higher Education" and written by Brian Heap, a careers teacher, gives copious information to intending candidates on how to apply for courses, what the institutions are like and what admissions tutors are seeking.

For the first time it tells candidates whether a university will consider an application if it is placed fourth and fifth on the Universities Central Council admissions form. It also tells them which departments ask for interviews and will arrange an open day and whether general studies A levels are acceptable.

What will be of greatest interest to the sixth-former are the subject tables listing the average asking grades of over 300 courses at different institutions. A student will see for example that for English and French combined Aberystwyth generally asks for a B and two Cs, Birmingham offers range from three Cs to three Bs, Lancaster from a BCD to a BC, Leeds two Bs and a D, Reading two Bs and a D, Southampton two Bs, Swansea two Cs and Portsmouth Polytechnic two Ds.

The book also tells the student where pressure on courses is particularly severe.

"*Degree Course Offers 1978/9. Winning Your Place at University, Polytechnic and other Institutions of Higher Education*, by Brian Heap published by Careers Consultants Ltd, Richmond Hill, Richmond, Surrey, at £1.80.

NUS protests on overseas student plan

by Peter David

The National Union of Students has protested strongly to the Government about new proposals for financing overseas students drawn up by an interdepartmental team of civil servants. It promises "fierce resistance" to cuts in numbers.

In a letter this week to Mrs Williams, Secretary of State for Education and Science, the NUS president, Mr Trevor Phillips, expresses "serious concern" at the lack of public consultation.

The letter says: "I was disturbed to read in last week's *THES* that the DES and other Government departments have now drawn up new plans for the financing of overseas students.

"Whilst understanding the need to consult on some worked-out proposals, it would be totally counter-productive if we were to be presented with a *fait accompli* by the Government."

Mr Phillips's letter follows last week's disclosure that the DES intends to replace the existing £120m subsidy of overseas students with a bursary programme. Foreign students who fail to receive bursaries would have to pay the full cost of their courses.

Some aspects of the scheme, particularly the idea of favouring the less wealthy, are welcomed by the NUS.

A warmer welcome for the Government proposals came this week from the local government associations. Mr Bob Morris, education under-secretary of the Association of Metropolitan Authorities, said the association regarded overseas students as a matter of central government policy and they should therefore be paid for from central government funds.

Poly and university admissions healthy

continued from page one

results, most registrars are reluctant to identify trends until much later.

At Manchester applications for places are well up on last year for all courses—and most are either full or nearly so.

Courses in chemistry and maths generally seem less in demand, while civil engineering courses are generally filled, as at Kingston and Plymouth. Other full courses at Kingston include fine art, graphics, fashion, law and music.

Thames's well-established BSc in estate management is full—and has a waiting list. Otherwise administrators there are even now prepared to deal with new applicants.

Business studies continues to attract enough students to fill the courses.

The cut-back in overseas students is having its effect on some courses at the Polytechnic of Central London, engineering and the environmental studies particularly.

Polytechnics' problems are magnified when their applicants are accepted for university places at the last minute. Already they report signs that universities may be lowering entrance standards. Similarly, aspiring university undergraduates are finding their A-level grades may not be good enough and are searching for polytechnic courses instead.

Grant could stop HE talent waste

continued from page one

asked whether they might have enjoyed an if a grant were available. 42 per cent of boys and 49 per cent of girls said they might stay on. Of those leavers in the top 10 per cent of the ability band 60 per cent of boys and 53 per cent of girls said they might stay on with a grant, while of those leavers in the top 30 per cent ability band 49 per cent of boys and 47 per cent of girls said they might carry on.

It was found that 15 per cent of boy leavers and 24 per cent of girl leavers in the top 30 per cent ability band in any one year dropped out with their education for a grant of £10 a week. In the year of the survey, 1977, a uniformly available grant of £8 per week would have increased the number of boys remaining on by 4.8 per cent and the number of girls by 56 per cent. Such an increase in post-compulsory enrolments would also undoubtedly have spill-over effects on the number of entries to higher education, the authors say.

If an £8 education maintenance allowance was offered the study found it would only be sufficient to tempt one in 10 of the boys and just over a third of the girls in the top 30 per cent ability group to carry on.

NEXT WEEK

Maynooth: after the High Court case.

Student drama at the Edinburgh festival.

Professor David McLellan reviews two new books on Trotsky.

THE TIMES NEWSPAPERS LIMITED, 1978
Printed and Published by Henry Stanhope at New Printing House Square, Gray's Inn Road, London WC1X 8EZ, England. Friday, September 8, 1978. Registered as a newspaper at the Post Office. Second class postage paid at New York, N.Y. and at additional mailing offices.

THE TIMES
Higher Education
SUPPLEMENT
September 8, 1978 No 356
Price 20p

Why German engineers are better off

by Robin McKie
Science Correspondent

A startling picture of inferior training procedures for engineers in Britain, poorer industrial prospects and greatly reduced salary scales compared with their colleagues in West Germany, was revealed in Bath this week.

In a paper to a symposium on "engineering and society" at the annual meeting of the British Association for the Advancement of Science, Mr Peter Lawrence said German engineers had better qualifications, better career opportunities and better educational credentials compared with those in Britain.

It has always been recognized that British engineers are the poorer cousins of those in many European countries but the degree of divergence indicated by the study is still surprising. In particular, the survey revealed that the average salary for an engineer in Britain in 1976 was £5,510; in Germany it was £12,119. At this time the cost of living in Germany was only 36.4 per cent higher than in Britain.

Mr Lawrence, of the mechanical engineering department of Southampton University, said that in Germany the educational system was not complicated by an interlocking of qualifications awarded by institutions and those awarded by the national education system. "In Germany the conception of engineering work is such that the state must have exclusive responsibility for the training of engineers through the national education system" he added. "This training is always in the form of full time courses and at all levels the courses are longer than in Britain".

Mr Lawrence, together with Professor Stanley Hutton, carried out a survey using lengthy questionnaires dealing with the background, education, training and professional ability of German engineers.

The study revealed two further points of contrast between the British and German education systems for engineers. First, in Britain, a practical component of university courses was often required but was not universal. In Germany, a six-month practical training period was a mandatory requirement.

The second point was that in Germany, engineering courses were assessed as requiring a good average A-level attainment but students in Britain had revealed that the A-level attainment of British engineering undergraduates was below average for all subjects.

There were also closer connections between industry and educational establishments in Germany. The typical professor in Germany had an industrial background and representatives of companies usually pronounced themselves generally satisfied with the courses offered by educational institutions.

Many of the differences in Germany were due to the different perception of engineering and science in that country, Mr Lawrence added. In general the relationship was tilted in favour of engineering both culturally and quantitatively. "It is clear from the posts held by engineers in German industry that they are regarded as industry's major human resource and suitable for non-technical posts and general management positions", he said.

The improvement status of German engineers reflected the country's greater interest in making things and their greater emphasis on economic success, Mr Lawrence concluded.



The Gospel according to Dorothy—Professor Hodgkin gives her final presidential address at the BA's opening session in Bath Abbey.

Closure threat to poly in CNAA's toughest-ever report

by Peter David

Teesside Polytechnic is facing the prospect of closure in the wake of the most critical report on an institution ever produced by the Council for National Academic Awards. The council is to cease recognition of the polytechnic after the 1979-80 academic year unless there is "substantial improvement".

Copies of the report have been circulated confidentially to Cleveland County Council and members of the governing body and academic board. It describes the polytechnic as dispirited, poorly led and understaffed. The computer unit is on the verge of "complete collapse", the library is inadequate and the relationship with the local authority is bad.

"On visiting the departments and faculties, members found a polytechnic which still contains some academic work of a high standard, but which in general is dispirited, confused and without confidence", the report says.

"Some departments have suffered less than others, and some have been held together by good leadership, but initiatives which are taken are not coordinated, and tend to be frustrated by a lack of the leadership from the top, by the absence of a viable decision-making machinery, by an inability to discover how and where important decisions are taken, by a lack of faith in the polytechnic's direction, as well as by inadequate resources."

The council is understood to have taken legal advice before inserting a separate section on the director, Dr John Houghton. It says: "For reasons which are apparent from the rest of this report the visiting party could not feel assured that the director was fully and properly discharging his responsibility for the internal organisation and management and discipline of the polytechnic' in accordance with the articles of government."

The report says there has been a failure of communication between the polytechnic and the local education authority resulting in a lack of resources to a point which will endanger acceptable academic standards. But it points out that neighbouring Teesside College of Education has a "close and supportive" relationship with the authority. Good management in the polytechnic could have influenced Cleveland's attitude, the report says, but "there is little evidence of any coherent analysis and real appreciation of the problems at the level at which the authority would normally expect to be kept informed".

Internally only one of the five faculties is working well, the report says. The department of social studies had for two years "been rent by a dispute which showed few signs of settlement at the time of the visit". The head of department was at the centre of the dispute and in no position to resolve it, and "the visiting party was surprised and concerned to find that the director regarded the matter as 'out of his hands'".

Attempts to discover where decisions were made failed. No significant policy emerged from departments, the faculty structure provided no planning and coordination and the other academic board committees did not have "a very positive presence.

"Members could find no evidence that the academic board itself is exercising its function, which is to 'plan, coordinate, develop and oversee the academic work of the polytechnic.' Not surprisingly, there is no adequate strategic plan and even individual course proposals do not seem to be tested against the resources which are likely to be available, or against any plans for the development of centres of excellence".

Papers submitted to the CNAA for its visit did contain a statement of "strategic objectives", but was three years out of date. An "academic development plan" failed to come to grips with the real issues or to estimate the resources needed to run new courses.

At the time of the visit in May little preparation had been made for the forthcoming merger with the college of education, due to be formalized this month. Senior staff in the polytechnic did not know what recommendations the authority had made to the DES about new articles of government, but this could not justify the absence of "any well-devised strategies for the future".

Reviewing the administrative arrangements in the polytechnic, the report says that central services function only by imposing "unascertainable burdens of work upon undergraded existing staff". Some functions were not performed, and

continued on back page

Students 'forced out' on ethics issue

by Phil Munro

A former postgraduate students at Glasgow University claimed this week that they were failed in their final examination in clinical psychology last summer because they had ethical objections to part of the course.

They objected to taking part in a behavioural modification programme which offered tokens as prizes to psychotic mental patients in order to encourage them to behave in a certain way.

The students, Mr George Maskell and Mr Robert Harvie, claim they were the only students on the course who objected and the only ones who were failed in the examination out of 31 last year (in Mr Harvie's case by an average of two marks).

The British Psychological Society has published guidelines that state that because there are ethical objections to such techniques as behaviour control, they should not form a mandatory part of the MPhil clinical psychology course, as they did in Glasgow.

In a further extraordinary allegation, Mr Gordon Craig, divisional officer of the Association of Secretarial, Technical and Managerial Staffs (ASTMS), which has represented the men throughout their nearly two-year dispute with the university, says he discovered that a member of the department of psychological medicine advised hospitals in Glasgow not to take Mr Maskell and Mr Harvie on placement. This effectively prevented them from continuing with their course.

As a result of his experience, Mr Harvie has decided to give up psychology altogether and Mr Maskell will not be pursuing a career in clinical psychology. Both have withdrawn from the course and have resigned from their posts with the Greater Glasgow Health Board, which was seconding them full time to the two-year course. Neither was aware, before joining the course, that the behaviour modification programme was mandatory.

Their case has called into question not just the procedures of the department of psychological medicine but of the university itself. The senate twice investigated appeals by Mr Maskell and Mr Harvie against their examination failure and twice turned them down without giving detailed reasons. The senate's first inquiry did find that, in Mr Maskell's case, there was "some evidence that his preparation for the examination had been disturbed by his ethical objections to one of his clinical placement projects".

The senate recognized this fact by offering both Mr Maskell and Mr Harvie the chance of a resit examination last November—but they could not do so since resits are not allowed on the MPhil course. The senate none the less repeated this offer after its appeals committee met to consider the appeals for a second time in May

continued on back page

First moves on China swop

by Ngaio Crequer

The British Council is considering the formation of a top-level delegation to China to examine in detail the specific problems involved in the exchange of up to 2,000 students between the two countries.

Both China and Britain are hopeful that the first students from both countries will be able to take their places next year. The proposal to send the delegation, which is still being discussed, is a direct result of the visit made to China by Mrs Williams, the Secretary of State for Education and Science, in July.

It is understood that Chinese students who would come to Britain under these arrangements would be exempted from the normal quota for overseas students. This is an unusual arrangement but certainly not unique.

Earlier this year the Department

continued on back page

Contents

Trotsky



David McLellan reviews two new books on Trotsky, 'the principal inspirer of the extreme left', 13

Success or failure?
Tessa Blackstone discusses the progress women have made in higher education in the last half century, 11

Maynooth
Paul McGill reports on the troubled recent history of St Patrick's College, Maynooth, 9

After Bakke
Steven Muller argues that more black Americans should be properly prepared for higher education, rather than a quota system introduced, 26

Lancaster
The fourth international conference on higher education was held at Lancaster last week, 2

Hongkong
An eight-page special report on the current state of higher education in Britain's most populous colony, I-VIII.

North American news	5
Overseas news	6, 7
Books	13-15
Noticeboard	16
Classified index	17
Don's diary	26
Letters	27

Biggest grants campaign for years

The biggest student grants campaign for several years was announced today by the National Union of Students. Action will continue until Easter, concentrating first on the promise of grants for 16-19-year-olds.

Student leaders fear that the prospect of a general election and the declared opposition of the Association of County Councils will delay implementation of the new system of statutory awards proposed in May by Mrs Williams, Secretary of State for Education.

The union is anxious that the target date for its introduction—September 1979—should be met.

Mike Fenny Cooper, NUS treasurer, said: "We are determined to make Shirley Williams' promise a reality, whatever party wins in the election. Both Tory and Labour leaders have expressed a commitment to this age group and we want to see some action now."

Legislation is required if statutory grants are to replace the present discretionary system and students will be asked to exert maximum pressure before Christmas to have this introduced. A briefing document sent to student unions this week calls for local action beginning at the end of October and culminating in a national day of action in November.

Unions are urged to seek the support of their college authorities and campus trade unions, as well as lobbying MPs, councillors and parent teacher associations. Demonstrations and pickets are proposed where support is not forthcoming.

Because of the nature of the demands, which include pitching the grants no lower than the equivalent rate of supplementary benefit, the National Union of School Students will also be directly involved for the first time. No decision has been taken on what action, if any, will take place in schools.

NUS wants the grants paid directly to the students for all courses of full-time study beyond the age of 16, with a means test as operated for determining eligibility for free school meals. To match supplementary benefit payments, 18-year-olds would be paid £13.90 and others over £11. At present the union estimates that nine out of 10 further education students in this age group receive no grants, while the rest average only £2.22.

After Christmas, when such campaigns normally begin, the emphasis will switch to the mandatory grants. The union wants a review of the way grants are assessed, leading to a substantial increase in rates.

Student unions will also be asked to continue publicizing the practice of paying grants through caveats, hopefully encouraging the Government to abolish the parental means test. Some 4,000 inquiries have been received.

New research chief

Sir Alec Merrison, FRS, vice-chancellor of the University of Bristol, has been appointed new chairman of the Advisory Board for the Research Councils. He will take up the post next year when he completes his task as chairman of the Royal Commission on the National Health Service. He succeeds Sir Frederick Stewart, FRS.

Lancaster Higher Education Conference

Political class is too assertive

by Peter Scott

Politicians and civil servants have become much more "assertive and intrusive" in and into the affairs of higher education, Professor Burton Clark of Yale University told the Fourth International Conference on Higher Education.

Professor Clark, who heads the university's Higher Education Research Group, said that more and more issues in higher education were now divided along the lines of party politics. Ministers and legislators now possessed experts on their own staffs in many countries.

"Higher education in every country of western Europe is more politicized in the mid-1970s than it was two decades earlier", he added. "In Britain rising costs and increased public interest already have caused 'the political class' to become more involved. There is no dearth of evidence that politicians increasingly see the coordination of higher education as too important to leave to educators and a bureaucratic staff."

However, Professor Clark also stressed the continuing influence of academic units. Bureaucratic or political coordination of higher education could be carried only so far. "Just as systems can creep up on institutions, so institutions can creep away from control", he said.

The basic membership group in nearly all universities and colleges was the discipline or profession. These provided "a functional base for strong departmentalism".

He argued that the superstructure of committees, faculties and even institutions was not only composed of groups of disciplines but was to a great extent ruled by them.

Although the expansion of student numbers had led to a great increase in bureaucratic control of higher education, it should not be assumed that in any struggle for influence between academics and bureaucrats the latter would be automatic winners.

Professor Clark admitted that a powerful case could be made that in the rapid changes of the last 20 years senior professors had been the great losers of academic power and state administrators the ones who had gained most.

But the academic "understructure" of departments and disciplines rolled on and moved about in its own ways. Centralized coordination became self-defeating if it became out of step with this "organic professionalized understructure."

He added that too much centralization led eventually to creeping decentralization back to the level of the individual enterprise or institution. This was particularly likely to happen to higher education because its tasks were so esoteric and the whole enterprise so ambiguous.

Professor Clark identified four paths of coordination, by bureaucracy, profession, politics, and the market. "It is much more useful to search for ways in which they are reconciled than to urge a single form to the exclusion of the others," he concluded.

Yale skipper sparkles in world cup

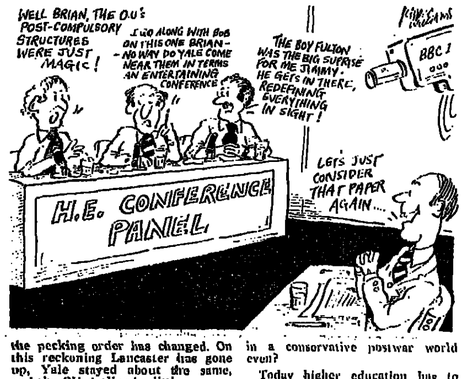
Yale's Higher Educational Research Group captained by Burton Clark nosed ahead, four papers to three, of the home team, Lancaster's Institute for Research and Development in Post Compulsory Education captained by Gareth Williams, at last week's "world cup", the fourth international conference on higher education held at Lancaster.

However, many would dispute Yale's win. The goal of the match was certainly the paper by Lancaster's Oliver Fulton and Alan Gordon on the "pool of ability" among 15 and 16-year-olds in Britain which was both the report of original and substantial research and likely to have an immediate impact on policy.

Yale's goals, in contrast, were rather scrappy—although their sustained but uninspiring graft in the working parties was made up for by a sparkling performance by their captain, Professor Clark, who gave probably the best plenary address during the four-day match.

But neither Yale nor Lancaster could rival the Open University's score-line of eight papers. However, those were heavily concentrated in the "lower division" working parties, on student learning and the role of the media. The OU managed only one score in the top two divisions, "post compulsory structures" and "priorities for the 1980s".

Part of the fascination of a conference like last week's in Lancaster is to observe both the rivalry and the interdependence of the various networks—Yale's HERG, Lancaster's IPCE, the accolytes of the OU's redoubtable pro-vice-chancellor Naomi McIntosh, and so on. The world of higher education policy studies is a small and slightly incestuous one. This conference therefore was an opportunity to observe how



the pecking order has changed. On this reckoning Lancaster has gone up, Yale stayed about the same, and the OU declined a little.

This incestuous quality came through in serious as well as trivial ways. Although the 250 delegates came from 25 countries, it was really a gathering of the rich North Atlantic world and its southern hemisphere outposts. The few participants from Hongkong or the West Indies were overwhelmed by the big battalions from America, Britain, Sweden, and the acronymic supranational organizations that live mainly in Paris.

All this deeply marked the character of the discussion at Lancaster. Everyone realized that today's questions are different from those of 10 years ago but no one seemed sure of the right answers. Then higher education could rest comfortably in the glorious isolation of its boom years. The questions were: what can universities and colleges do to provide opportunities for the eager mass of school leavers; to create economic growth; to stimulate intellectual radicalism in a conservative postwar world even?

Today higher education has to be linked much more closely with other social policies and the questions have been turned on their heads: what can be done in schools to stimulate demand? How can higher education be provided cheaply so that it is not a burden on the national economy?

A variety of responses to these new conditions weaved their subterranean way through the Lancaster conference. Although a *higher education* conference it spent much time discussing all postsecondary, even all post-compulsory education. There was for some the temptation to retreat into the shell of steady state, a deep hostility to "coordination" — the often desired "planning" of the 1960s in new and less attractive clothes — came through strongly. These were not answers certainly to the new questions for higher education but they were perhaps the raw material from which answers could be fashioned.

Extramural barriers should fall

The barriers between extramural departments and universities proper should be breached, Mr Oakes, Minister of State at the Department of Education and Science, told the conference.

"I can see no compelling reason why courses taken in that part of the university whose students are part-timers should not count, perhaps on a credit system, towards a degree", he said.

Mr Oakes also hinted that universities should be more flexible in the entry standards they demand from aspiring students. He called for "a fresh look" at entry qualifications. Experience had shown that the academically unqualified could achieve good results on degree courses when selection procedures had been sufficiently sensitive.

On adult education Mr Oakes felt there was a golden opportunity to make real progress towards continuing education and lifelong learning. The needs already existed. What was needed was a larger vision to enable them to grow into "a coherent, though still richly varied garden".

But the minister also stressed the urgent need to provide proper support for research and related high quality courses in higher education. We had to make sure there was no danger of support for the necessary brain power to promote scientific and technological discovery drying up.

Boundaries between sectors fade

It will become increasingly [illegible] to make a sharp distinction between secondary and higher education, Professor Urban Dahllöf of the University of Uppsala warned the conference.

He said that in most [illegible] strong political pressures were being governments not only to provide equal educational opportunities but also to redistribute these opportunities. This would benefit in the first place vocational courses in secondary schools and further education.

However, Professor Dahllöf predicted the boundaries between present-day sectors of education would be loosened up. So [illegible] against becoming too isolated.

He welcomed the new [illegible] recurrent education provided [illegible] was regarded as "a planning principle rather than a new [illegible] star" and that it was realized that it was often an ex-post factor justification of existing practice.

Nor did the growing [illegible] of recurrent education mean that all barriers between the different sectors should be abolished. It could help policy-makers [illegible] better plans provided they did not use it as an opportunity to impose a unitary pattern.

"Recurrent education may [illegible] quite different things to different people", he added.

Elements of conflict in the 1970s bring new attitudes

by Simon Midgley

Lord Briggs, provost of Worcester College, Oxford, delivering the first plenary address on the conference's general theme "post-compulsory education in the 1980s", said that at least five areas of interest ought to be considered: higher education in universities, polytechnics and other institutions in which study led to a degree; vocational work; adult education; leisure education and education for particular age groups, for example, the over-65s.

Reviewing the reasons why over the past few years educationists internationally had started talking about post-compulsory education rather than higher education, he said six major factors ought to be considered.

First there had been demographic changes: not only had there been a falling-off in the size of the traditional higher education age-group but there had been an increase in the proportion of the population who were over 65.

This, he said, had led to increased interest in the problems of aging and, in turn, in the concept of education as a continuing process.

There had also been increasing concern about what he described as the "malaise of our institutionalization," beginning with the appearance of Ivan Illich's book *De-Schooling Society*.

The third factor he identified was the emergency of new attitudes to work and leisure and the shape of societies. "We are dealing in the 1970s as we were dealing in the 1960s with elements of conflict, uncertainty which do emerge from changing attitudes to work and to leisure. The question is to what extent is education for life a necessary element in a new kind of society as necessary as schooling was in an earlier kind of society."

Other factors that needed to be recognized, Lord Briggs said, were a reassessment of education's social need in the light of social criteria, the influence of specific pressure groups and revisions of governmental policies.

There were, he believed, [illegible] possible patterns of educational [illegible] post-school provision in the 1980s: the system could be allowed to develop in a sporadic fashion as a result of separate, uncoordinated initiatives; efforts could be made to strengthen and coordinate the existing range of educational activities providing these did not become instruments of policy; efforts could be made to strengthen and coordinate the existing range provision while supporting specific activities judged to be necessary priorities; or a comprehensive system of adult education could be created.

While not favouring any attempt to create a state coordinated comprehensive system of adult education, Lord Briggs said that the most likely model for the future would include strengthening and coordinating the existing range of educational activities and, later, supporting specific activities judged to be national priorities.

Crisis over subject matter

The western world was facing a crisis over the subject matter of post-compulsory education, Lord Valzey, head of economics at Brunel University, told the conference.

Loss of esteem, particularly in such disciplines as the social sciences, the self-doubt this had engendered in academics, together with massive youth unemployment were more responsible for the crisis than the popular belief that the causes were demographic.

The whole view of post-compulsory education was also closely connected with political happenings and this too was likely to intensify pessimism and doubt.

Certainly one recourse was no longer open to institutions—that of solving problems simply by growth.

"We can no longer escape the basic question of what students want to learn, what they ought to learn, and how they should be taught. If we don't settle these questions there will be no more than a scramble of self-interested pressure groups. The answers lay in flexibility and mobility. Institutions must no longer be in carefully ranked hierarchies. They must be prepared to change their structures and courses to cater for new students and the unaccustomed groups in the community such as older people, working class girls, the unskilled and the handicapped.

Both staff and students must be prepared to move about and must expect to have to change as they adjusted to the needs of the new learners.

Demand for part-time degrees will grow

by Bert Lodge

Eighteen-year-olds should be able to get a degree part-time, Mr Leslie Wagner, Central London Polytechnic, told the conference.

This would not only help to meet the demand for higher education for the bulge expected in the early 1980s but also attempt to cater for a demand which has always been there and is likely to grow. Only lack of provision, particularly financial, has prevented it.

Part-time study for professional examinations has been a feature of the higher education scene for many years, Mr Wagner pointed out.

No significant advance will be made towards part-time degrees for the 18-plus without cooperation and encouragement from employers. At present they take in entrants to their training programmes either as school or college leavers at 18 or as graduates at 21.

"Why not establish training programmes which straddle this divide by providing employment, company training and entry into the firm's career structure at 18-plus together with part-time higher education?", Mr Wagner asked.

Countering an argument that an experiment by the Open University in 1971 to carry 1970s when 500 18-year-olds began a degree course only to drop out in considerable numbers, Mr Wagner, a former Open University lecturer, said this was caused by the problems of long distance learning, particularly that of isolation from other students, rather than the part-time element.

At present only about 7,000 students are following first-degree courses part-time in universities and colleges with a further 55,000 undergraduates at the Open University. This compares with about 300,000 in full-time higher education.

Remarking on the small number of part-timers, together with the 30,000 a year turned away by the Open University, Mr Wagner contested the conclusion in the DES document *Higher Education into the 1990s* that for part-time higher education "there is little evidence of unsatisfied demand".

Outlining the difficulties facing the part-time student he discounted the attraction that the part-time student is able to hold on to his income while the full-timer has only a maintenance grant. He estimated that in 1976, comparing a CNAA degree by part-time study with a university degree full time the net advantage spread over the lifetime of the degree amounted to about £400 a year.

But the full-time student obtains his degree two years earlier and begins to earn his higher salary while the part-timer is still studying.

"If the comparison is made over the five years needed for the part-time degree with the higher income of the full-time student incorporated into the calculation the difference in net costs between the two options would be very small."

A growing trend towards all-graduate entry into a number of professions will close doors to school-leavers which were previously open. Moreover, the increasing number of entrants with degrees will produce an increased demand for part-time degree studies from mature non-graduates in the professions.

Smallpox lab was due for investigation

by Robin McKie
Science Correspondent

Birmingham University's virus laboratory was shortly to have been investigated as part of a routine government health and safety check when the suspected smallpox outbreak there was discovered.

Mrs Janet Parker, a photographer working on the floor above the smallpox laboratory, was found to have the disease three weeks ago. Another smallpox suspect was last week allowed to return home.

Last week, the head of the university's medical microbiology department, Professor Henry Bedson, was found at his home with his throat cut. He died on Wednesday.

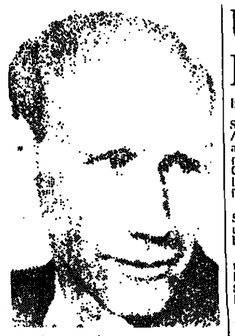
The government watchdog body, the Health and Safety Executive, began routine safety inspections this year—about 20 per cent of British universities are to be covered each year—and Birmingham was one of the first on the list. Inspection had begun but had not reached the virus laboratory, which is within the department of medical microbiology.

The university could face legal action if subsequent investigation shows any indication of negligence or criminal irresponsibility at the laboratory. The executive has already ordered it to cease all work with dangerous viruses and prosecution could follow if it was believed that the Health and Safety at Work Act 1974 had been broken.

Conviction could then result in fines of up to £1,000 at a magistrates court or unlimited fines and a maximum of two years in jail if the case was taken at a Crown Court.

However the laboratory had already closed down by the time the HSE ruling was announced. The university has pointed out that it had been visited in 1976 by the Dangerous Pathogens Advisory Group, which had authorized it to continue smallpox work, and this year by a team from the World Health Organization.

The advisory group is responsible for informing the Department of Health and Social Security about the codes of practice which should be adopted for dealing with category A pathogens, the most dangerous forms of viruses, including smallpox. A DHSS team is now



Professor Bedson

investigating the Birmingham laboratory outbreak.

Birmingham was the last university laboratory in Britain to continue research into smallpox and was shortly scheduled to cease this work. The outbreak is the first in almost a year to have been reported anywhere in the world, the last case being diagnosed in Ethiopia.

WUS makes 100 awards to Chileans

by John O'Leary

Awards have been made available for more than 100 Chilean refugees who feared they might lose places in British higher education because of delayed grants announcements, but changes in regulations may rule out many of those who have been in the country longest.

Although the World University Service has been told it can allocate 115 grants to Chilean students, those who have been in Britain for three years or more will no longer be eligible for the scheme. Only the spouses of present award-holders will be exempted.

The reason for the change of policy is that prospective students who have been in Britain for three years could now apply for grants from local education authorities in the normal way. Funds for the WUS scheme come from the Overseas Development Ministry, which is anxious not to duplicate existing provision.

About 20 Chileans are likely to be caught in the change of responsibilities. WUS expects few of them to obtain grants because most, and particularly any postgraduates, are likely to find they are too late to apply successfully to their local authority.

Less than 50 awards have been allocated so far because of the delayed announcement, but WUS is confident of filling almost all the places. However, English language courses, which are vital for many of the students to take any real part in their courses, have had to be shortened to a length considered unsatisfactory by those administering the scheme.

Teachers back Commons inquiry call

The National Association of Teachers in Further and Higher Education wants an immediate answer from the Government on the call for a major inquiry into the educational and training needs of the 16 to 19 age group and their transition to work by the House of Commons Expenditure Committee.

The report *People at Work* concentrates mainly on what measures should be taken by the Government, the Manpower Services Commission as well as educational and career bodies. It says that the time is ripe for an inquiry.

In its response to the report, NATFHE says it would expect to be represented on such an inquiry, since it has long supported its establishment.

The association welcomes the report and in particular recommendations for the coordination of agencies. It stresses that it has long sought the establishment of a Department of Education, Science and Training and believes that administrative structures should be set up to overcome the division between education and training.

It deplores the report's lack of enthusiasm for compulsory day release and reiterates that all young people should have the right of access to continued education and training beyond the compulsory school leaving age. This should be as a first step towards the phasing in of compulsory day release.

The Association of Metropolitan Authorities in its response expresses disappointment over the rejection of the careers service as the exclusive agency for guidance and placement of young people.

NATFHE presses for word on exams

The National Association of Teachers in Further and Higher Education is to urge the Government to make an early announcement on the introduction of a common system of examinations at 16 plus, following the Waddell Committee Report's acceptance that it is feasible.

Although it welcomes the report, the association is concerned that the lack of adequate further education representation on the committee has led to a neglect of that area as providers of candidates.

Claverton

Restoration of the Claverton pumphouse was carried out by volunteers directed by the Kennet and Avon Canal Trust and not purely by engineering students from Bath University, as reported in *The TIMES* (August 25.)

Union lifts sanctions on BEC courses in Surrey

by Patricia Santinelli

Sanctions imposed by the National Association of Teachers in Further and Higher Education on the preparation of Business Education Council courses at four Surrey colleges have now been lifted, but only for the current financial year.

This follows negotiations between Surrey County Council and the union's national executive which began in July.

The dispute which arose out of a refusal by the authority to grant 60 lecturers at Brooklands, North East Surrey, Guildford and Redhill colleges extra resources has already prevented the start of any BEC courses in 1978.

Now the authority has agreed that £1,000 originally available for two colleges could be used for the preparation of BEC courses, without any detriment to other courses in the colleges. Additional resources originating from good housekeeping by the colleges would be allocated to Technician Education Council and BEC courses. More importantly the council has promised that requests for additional resources in the 1979-80 budget will be given sympathetic consideration.

But Mr Peter Dawson, NATFHE's negotiating secretary, warned that they were only satisfied with solutions for the current financial year: "Our position will be reconsidered when budgetary arrangements for next year are known", he said.

NATFHE's dispute with Oxfordshire County Council involving six colleges in a similar position has not yet been resolved. But the authority has agreed to meet a national deputation within the next month to discuss a possible solution.

● A major scheme of vocational education for adult employees who have spent some years in their jobs is outlined in a BEC consultative paper published this week.

The main purpose of the paper is to encourage discussion by all interested parties of the council's role in the provision of post experience business education, and to enable BEC to respond constructively to any Government initiatives on the future education and training requirements of adult workers.

The BEC points out that Britain cannot stand aside from the growing movement in Europe to give adult employees the right to full-time paid educational leave, in addition to day release facilities.

The paper suggests that there is a clear need for a review of post experience business education and for providing courses geared to meet the requirements of experienced older people, whether self employed, in employment or seeking to re-enter employment.

"However any educational provision for older people must be built on the experience and responsibility they have obtained" the BEC says. "Therefore course content is likely to be more important than diplomas and certificates, especially as many students may wish to study only one topic relevant to their jobs, such as health and safety at work".

Courses could include, where necessary, elements for employees's career re-orientation, updating of knowledge, experience and skills and for increased professional recognition.

They would be modular, student centred and based on seminars case studies and project instruction with tutors who had considerable first hand experience of business practice and procedures.

Tutorial centres would be geared to offer a variety of study routes for individual modules or a coherent group of modules—these would be validated by BEC—but the council warns that this will be dependant on how quickly the Government and employers introduce proposals for paid educational leave or other financial arrangements.

The completion of a coherent group of modules would qualify for a BEC post experience award. A student's written and oral performance in connection with the assessment of work completed during the course and the formal assessment and oral examination of a project would form the basis of this award.

The BEC proposes that the study period should be kept comparatively short. There might be correspondence courses or similar provision for people unable to attend a centre for regular instruction.

In such cases", the document states, "it would be advantageous for the course to include a compulsory period of residence to ensure that students received individual assistance with their problems

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RESEARCH

Scientists trained as managers

by Patricia Santinelli

Scientists in charge of research teams are to be provided with managerial knowledge and skills through a new two-week course in the management of research to be held at Henley's Administrative Staff College next month.

The course, part of Brunel University's management programme, is supported by a grant from the Leverhulme Trust. It has been specifically designed to meet the needs of scientists in any basic discipline who are occupying positions of middle management in research laboratories—those actually in charge of teams of up to 16 strong and responsible for one or more projects at any one time.

Its setting up is based on the realization that research today is increasingly a team activity and the leader of team, though he may have been appointed on account of his scientific ability, has a managerial job to do which requires a whole new range of knowledge and skills.

The overall objectives of the course are to help participants do their present job of managing research more successfully as well as to develop their managerial skills so as to fit them for wider responsibilities.

The course material will include the selection and control of research, budgeting, application of research results, working on research teams, staff development and matrix management.

Mr Keith Alsop, the course director, recently retired from the Building Research Establishment of the Department of the Environment to act as a consultant to Brunel on the course. At the BRE he had initiated and developed a similar course for principal scientific officers, which has been held annually since 1972 and is now attended by scientists throughout the Civil Service.

Aston behind portable test kit

by Ngaio Crequer

A do-it-yourself chemistry set, no bigger than a picnic box, has been developed at Aston University for making on-the-spot tests for dangers of explosion, poison or corrosion following chemical spillage.

The idea has now been taken up by Fospur Ltd, of Somercotes, Derbyshire, a manufacturer of industrial chemicals for worldwide marketing, and the kits will sell at £125 each.

The kit was developed by Mr Martin Pitt, while he was working as a technician at the university. It can be used by police, fire and ambulance services and is designed to be complementary to other safety systems.

The equipment contains a visor, face mask and an operating manual and can be used by trained laymen and experts alike. The kit enables the operator to make a series of up to 10 tests. According to the chemical reaction he will be able to identify substances and find out where dangers lie in just a few minutes.

Mr Pitt said: "With over 60 million tons of chemical products moving around the roads every year, there are terrible risks. The mini-lab allows detection of the type of hazard involved very quickly and would enable emergency services to evacuate an area if there was any possibility of disaster", he said.

The kit could also be used in factories, to identify harmful spillage from storage drums or at local authority rubbish tips.

Success with antimatter

by Robin McKie
Science Correspondent

The first successful attempt at storing antimatter has been carried out in Europe. The achievement was made at CERN, the European Organisation for Nuclear Research, this summer during tests using the SPS accelerator.

Several hundred antiprotons produced from the accelerator were kept circulating in a 24 metre magnetic ring for 85 hours. The previous best experimental measurement of the antiproton lifetime was about one ten-thousandth of a second.

Although a fundamental principle of particle physics holds that protons and antiprotons should have the same lifetime, the lack of antiprotons in the universe has led to speculation that their lifetimes are much shorter than those of protons. The new experiment does not yet disprove this conjecture but has provided an important step towards new understanding of antimatter.

A proton is a stable particle present in the nuclei of all atoms. An antiproton is a grain of anti-matter having the same characteristics as a proton, except its electric charge is negative instead of positive. When an antiproton comes in contact with normal matter, both are annihilated in a burst of radiation.



The Cranfield A1, designed by students and staff at the Cranfield Institute of Technology, is being put through its paces by British acrobatics champion Philip Meeson at the Farnborough air show this week. The prototype is expected to lead to commercial models which will be used for pilot training and crop spraying.

Wolfson grant to Bath could bring industrial breakthrough

Bath University is to receive more than £250,000 from the Wolfson Foundation to support research in three areas which may lead to completely new and economical industrial developments.

Professor Edmund Happold's team in the school of architecture and building engineering is to be awarded £159,000 for developing a range of surface stressed flexible structures. These could provide a breakthrough in the manufacture of lightweight, inexpensive buildings to replace the traditionally massive rigid structures used for large span buildings and industrial plant like cooling towers, dams and storage vessels.

According to Professor Happold the structures could be particularly important because they would bring fabrics into construction. "Britain has a traditional textile industry which has been drastically reduced because of overseas competition. It also has a traditional construction industry which is at present 25 per cent unemployed", he said.

"Our concept will bring the two together and the resulting very economic construction methods could provide a range of structures for which there is a big demand overseas. This would give a big boost to exports."

Professor Happold said that both structural knowledge and textile engineering were at the point where these developments were imminent. Provided that the right "linking" research was carried out over several areas by specialists in the different fields, a major technological advance could be achieved.

Inexpensive edible protein, representing a major step forward in the economics of meat production is the aim of Dr John Bowcott and Dr Richard England's research in the school of chemical engineering.

Supported by a grant of nearly £50,000 they are designing and building a pilot plant to extract the substance from animal bone. They are intending to design a continuous process that can be developed to produce full commercial output.

Up to 12 per cent of the live weight of an animal is made of bone. It is estimated that 300,000 tonnes of raw bone from slaughter houses are processed each year, mostly by inedible rendering. Each ton provides products worth £80, whilst the new process might lead to products worth £300 to £400 per ton.

The third of the Wolfson funded projects could result in a welcome boost to the export potential of the British truck and bus industry.

Professor Frank Wallace, head of the school of engineering, is to receive £50,000 to continue his research into the design of complete engine transmission systems for heavy lorries, bulldozers, earth-moving machinery and other "off-highways" heavy vehicles.

Lasers used in crystal study

Lasers, photon counting systems and electron microscopy are to be used in two related projects beginning next month at Aberystwyth University College's department of chemistry.

The Science Research Council has awarded nearly £30,000 to the department, for the study of photophysics and photochemistry of organic, molecular crystals and an investigation of the relationship between chemical reactivity and the structure of these materials.

The department with the same grant is to undertake research on the crystallography and chemical composition of inorganic oxides and novel semi-conductory compounds. In addition the Royal Society has given a £2,000 grant to buy cyclic volumetric equipment for work in the electrochemistry of novel electrode systems based on inorganic oxides and semi-conductors, organic and polymeric materials and variants of carbon.

NUS ban on racists 'should be extended'

by John O'Leary

The ban on racist speakers in student unions should be extended to cover all educational institutions, Mr Trevor Phillips, president of the National Union of Students has said. This was one of six points students were asked to take up in a new campaign to promote multi-racial education.

Mr Phillips made his proposals at the NUS Teacher Education Conference, in Cardiff, at which race was the major issue. In his first major policy statement since becoming president he also launched a bitter attack on Sir David McNee, the Metropolitan Police Commissioner, and pledged the support of students for black self-defence groups.

Many schools and colleges were accused of reinforcing and perpetuating the racialism which exists in Britain today, while the educational needs and aspirations of blacks of all ages were ignored. Mr Phillips singled out attempts by some college principals to frustrate anti-Nazi activities by students, which, he said, had proved mostly unsuccessful.

"It would be easy for us as a union to become introspective and purely defensive, concerned only with the problems which directly affect our members, such as grants and union organization", he said. "Although these problems have to be tackled with vigour, we must not fall into the trap of ignoring the part we have to play in moulding the future shape of our society."

The union's controversial "no platform policy regarding racist or fascist organizations had to be understood in practice", said Mr Phillips. It had not been a vote for "unbridled head-banging", as demonstrated when Sir Keith Joseph attempted to speak at the London School of Economics, but for the right of a democratic institution to refuse to be associated with racial hatred.

For a group of people to shut their doors to racists was not only right but profoundly democratic, he said, because it had been de... to use resources to defend rights of black people. ... approach should be adopted ... schools and other educational ... tutions, and headteachers and ... cation authorities should ... the circulation of racist lite... in schools.

Another initiative he ... was the employment of more ... teachers. Only one in 700 ... teachers was coloured, com... with one in 25 pupils, he said, ... training the need for positive ... crimination to bring people ... ethnic minorities into the ... sion. Because of the experience ... America, bridging and foundation courses providing extra assistance ... raising standards were preferable ... the application of crude quotas.

Other tasks were to relate ... structure and curricula of ... to the needs of black pupils, ... as ensuring that the Youth Opportunities Schemes were relevant ... this section, persuading ... authorities to seriously consider the ... question of multi-racial ... and building links between the ... ent movement and the ethnic ... rities.

The conference later voted to ... dertake a review of school ... particularly in history and ... subjects, to establish whether ... was a bias against black people ... ban on racist speakers was ... firmed in the vote, although ... cisions taken at the conference ... be overturned at the union's ... conference in December.

Mr Phillips said NUS ... liberties had been infringed ... the activities of the Special ... on campuses and this had ... capped by Sir David McNee's ... tion of what use was an ... liberty if individuals were ... leave their homes or to ... streets. "This statement made by ... Police Commissioner down to ... a reactionary or a jackass and is ... the way towards the legitimisation ... of anti-democratic activities of ... darkest and most sinister ... Britain", he said.

Rejection of closures policy places leaders in dilemma

A new dilemma faces NUS leaders after the rejection of existing policies designed to save colleges of education from closure. The executive's efforts came in for heavy criticism and the strategy of sacrificing teacher training at some colleges in return for the maintenance of alternative educational use was reversed.

However, despite the defeat of the Broad Left approach by teacher education students, the policy remains unless it is overturned by a national conference. Mr David Aaronovitch, NUS secretary, made it clear that the executive would continue to campaign for alternative uses, regardless of the conference decision.

He accepted that the campaign against the closures had been a success but he pointed to the retention of all 10 Scottish colleges and the creation of sufficient interest to bring education into discussion by the TUC as examples of progress. A reasoned argument had been put to the Department of Education and Science for the retention of the colleges to serve local communities.

Mr Phillips, the president, ... that the union would be "... bidding to nothing" if it ... argue statistics with the ... restricting its campaign to ... and secondary education. ... into the trap of following ... graphic trends could lead only ... defeat, he said.

However, the demand for a ... paign based on the return to ... teacher training places, rather ... the 45,000 presently envisaged, ... all existing colleges remaining ... teacher education, won the ... A wide-ranging and idealistic ... called for radical reforms of ... government, universal provision ... free school meals and the introduction of grants for all students ... 16, as well as an immediate end ... teacher unemployment.

Victorious left-wingers failed ... vote as the first significant ... towards saving the colleges ... years of campaigning by both ... Conservative and Labour ... headquarters in South Square, West... minster, may be convened when ... election is called, Mr Aaronovitch said.

Look to Europe for adult links

Adult educators in Britain must address themselves not only to national problems but to wider issues embracing the whole of Europe. This was the message delivered last weekend by Mr Helmuth Dolff, president of the European Bureau of Adult Education, to the annual conference of the Educational Centres Association in Oxford.

In discussion at the final plenary session of the conference on Sunday, Mr Dolff, who is director of the German Folk High Schools Association, stressed the importance of strengthening bonds between adult educators in Europe.

He gained the impression that barriers were dropping rapidly in Britain and greater efforts were being made to establish links within Europe. "In future Britain adult education has not only to secure by legislation an internal solution ... it has to make sure it is making ... impact on the whole Europ... scene", he told delegates.

Mr Dolff was one of three ... pean guest speakers at the ... ence, which had as its theme ... cent issues in European ... education. From Sweden, Mr E... Jarlelius, editor of the journal ... the Swedish National Federation ... Adult Educational Associations, ... details of the operation of the ... education system in his country.

Mr Hans van Houte, secretary ... The Netherlands Institute of ... Education, described Dutch ... centres and residential colleges ... schools. Many industrial ... public services and trade ... were now concluding ... with the folk high schools ... courses specially designed to ... their individual needs.

North American News

An academic's idea of Bliss

Clive Cookson visits Dumbarton Oaks, a scholars' haven in the Georgetown district of Washington







The main house (top), garden, library (left) and music room at Dumbarton Oaks

...ack of the ideal working environ... for a humanities scholar: a ...acious and gracious mansion sur... ...rounded by one of the finest land... ...scaped gardens in the world; the ...ost library and art collection in ...eir field; no teaching commit... ...ments unless you really want them; ...e presence of other academics ...rking in the same area, if you ...ke having a learned dis... ...ussion; and peace and quiet.

Dumbarton Oaks in Washington, ... comes close to that ideal for ...holars in three very disparate ...elds — Byzantine studies, Pre-...olumbian America, and landscape ...rchitecture. This strange combina... ...ion of subjects reflects the personal ...terests of Robert and Mildred ...ods Bliss, the philanthopic couple ...ho established Dumbarton Oaks ...s a research centre between the ...ars in their home overlooking the ...th century Georgetown district of ...Washington.

They assembled a fabulous collec... ...on of Byzantine art and an ...ssociated library, on which the ...Centre for Byzantine Studies—much ...the biggest and most important of ...the three academic programmes at ...Dumbarton Oaks—was founded.

Mr Bliss collected the ancient ...American art on which the Centre ...for Pre-Columbian Studies is based. ...His wife was responsible for buy... ...ing the thousands of books on Euro... ...pean and American landscape and ...garden design that support the ...Centre for Studies in Landscape ...Architecture.

Mr and Mrs Bliss conveyed Dum... ...barton Oaks to Harvard University ...in 1940 with a healthy endowment ...(worth about $50 million today). ...Last year saw another break with ...the past, with the retirement of ...former ambassador William Tyler, ...Mrs Bliss's godson, as director, and ...the appointment of Giles Constable, ...a Harvard professor of medieval his... ...tory, as his successor.

Professor Constable is considering ...many possible changes at Dumbar... ...ton Oaks, though he clearly feels ...an obligation to run the place in ...accordance with the spirit of the ...donors.

The essential dilemma is whether ...Dumbarton Oaks should continue to ...operate itself entirely to the re... ...search needs of committed scholars ...in its three fields. Or should it ...take an active effort to bring its ...resources to a wider public, to open ...itself up to outsiders?

The Byzantine and Pre-Columbian ...libraries and the gardens are ...open to visitors six afternoons a ...week, ten months a year—and ...even through July and August. ...Should they to stay open all the ...year round?

For the collection to be "open" ...to those who already know about it ...rather than actively ...seek out and promoting itself—...Dumbarton Oaks has never ...taken Giles Constable is tempted ...by the idea of advertising Dum... ...barton Oaks and bringing in the ...people who think America ...began with Columbus, and, if ...asked to say where Byzantium is ...would, tonight reply that it is a ...small town in Ohio.

He wonders if the atmosphere ...of the place might be spoilt if the ...numbers of visitors (currently ...about 40,000 a year) increased ...enormously. What about security and ...fire precautions? Promoting Dumbarton ...Oaks as a museum would leave less ...room for Dumbarton Oaks as a ...research centre.

There are no students at Dum... ...barton Oaks. The 15 or so per... ...manent faculty members and 25 ...visiting scholars and fellows con... ...centrate exclusively on writing and ...research. Washington is too far ...from Harvard for them to have ...teaching duties there, and very ...few teach locally (though Professor ...Constable and one of his colleagues ...are lecturing at the Catholic ...University in Washington this ...year).

Nor has there been any attempt to educate the public. Labelling and explanations are kept down to the absolute minimum, for aesthetic reasons. There is no truce in quiet, scholarly Dumbarton Oaks of the rather aggressive instructional techniques other American museums have developed.

Professor Constable, who calls himself "an incurable pedagogue", is worried by the thought that the public sees Dumbarton Oaks merely as a jewel box and leaves the collections cooing over their beauty but completely ignorant of their cultural and historical settings.

At present, Dumbarton Oaks tends to have the attitude of a private institute that grants the public limited visiting rights as a favour. Professor Constable wants to change that to an awareness "that we have an absolute responsibility to display our objects and make our research resources available to the public."

One idea Professor Constable is toying with is an exhibition of the pieces in the collections that are now thought to be fakes. There could also be a display of doubtful objects, pointing out why some scholars believe them to be genuine and others don't.

Professor Constable is the first academic to direct Dumbarton Oaks—and the first Englishmen, although he has lived in the United States since the age of eight, when his father, who had been director of the Courtauld Institute in London, became curator of paintings at the Boston Museum of Fine Arts.

He believes firmly that a scholarly institution should be headed by an academic, though he does not want to seem critical of his predecessors, a professional museum curator and a retired ambassador.

He insists that his new post is not turning him from an academic into an administrator, though his administrative responsibilities seem to be leaving him very little time for medieval studies.

A book on medieval religious life and attitudes, on which he has been working for several years, has had to be suspended for the time being, but he still makes time to write papers on monasticism and Western Christianity for historical journals, and he continues to supervise graduate students at Harvard.

The appointment of a Western medievalist as director terrified some members of the Centre for Byzantine Studies. They feared that "Western parochialism", which they feel dominates medieval scholarship in America, would take over Dumbarton Oaks.

But Giles Constable has no wish to shift the geographical balance of the centre Westwards. What he does want is to bring Byzantine studies, which have been rather cut off from the rest of medieval scholarship in American universities, into the mainstream.

Dumbarton Oaks is the only interdisciplinary Byzantine centre in the United States and, according to Professor Ernst Kitzinger, a former Director of Byzantine Studies, it has the world's most complete research facilities in the field. Although most major universities have some Byzantine specialists, they do not cover the whole field—fine arts, archaeology, history, philology, theology, demography — as Dumbarton Oaks does.

In practice, of course, Byzantine scholars, like all their colleagues in the humanities, are individualists, and there has not been all that much cooperative work done at Dumbarton Oaks.

But Professor Constable is determined to encourage cooperation between Byzantine specialists within and outside his institution. For example, Dumbarton Oaks will undertake a joint investigation of late Byzantine and early Ottoman demography with the Centre for Byzantine Studies run by Dr Anthony Bryer at Birmingham University, England.

An eight-page questionnaire has gone out to about 500 Byzantine experts in the United States and abroad, asking what they think future priorities in the field should be and how Dumbarton Oaks can help to implement them.

For example, should Dumbarton Oaks continue its extensive programme of archaeological field work? Is a new Byzantine dictionary needed? Are teaching aids required, to enable college teachers to bring Byzantium into undergraduate courses?

The Centre for Byzantine Studies has about 20 visiting scholars and fellows, a dozen permanent faculty members and 25 librarians, photographers, editors and research staff. The Pre-Columbian and landscape architecture programmes are much smaller, with four or five visiting and permanent scholars each.

In the Pre-Columbian centre the emphasis is on the art of the great civilisations of America. Studies in landscape architecture are based on an unrivalled library started by his wife, containing thousands of rare books on landscape and garden design from Europe and America. (Incidentally, Mrs Bliss's family was the major source of the fortune on which Dumbarton Oaks is built. In polite terms it is a "manufacturing fortune"—in fact it came mainly from a famous patent laxative, Fletcher's Castoria. It is said that Mrs Bliss banned the advertising of this liquid in the Washington area, so that she would not be reminded of the origins of her wealth.)

In addition to its three centres of scholarship, Dumbarton Oaks is known for its music. Many famous artists and composers have performed in the fabulous music room, with its French Renaissance chimney piece, 18th century furniture and oak parquet floor, Gothic statues, 16th century tapestries, paintings by El Greco, Bernado Daddi, Degas, Renoir and Seurat, and other treasures. Several of Stravinsky's works were first performed here, including the Dumbarton Oaks Concerto.

Now that chamber music has become more popular in the American concert repertoire Dumbarton Oaks's importance has declined. But Giles Constable wants to use the music room for experimenting with instruments like clavichords and lutes, that are not suitable for a large concert hall.

What of Dumbarton Oaks's connections with Harvard University? Would it be better off if the Blisses had set it up as an independent research institution?

"It would be better and worse", says Professor Constable. "I think it has benefited from its association with a great academic institution whose standards are not in doubt....

"I think it has benefited from the wisdom and probity of Harvard's financial management. I know there are people in Washington who think Harvard wants to lay its hands on Dumbarton Oaks's fund—they're wrong".

But Professor Constable feels the Harvard connection has tended to cut Dumbarton Oaks off from its Washington roots. Also, since Harvard Corporation acts as the governing body of Dumbarton Oaks, it has not had a board of trustees who can give it their undivided attention.

"This mattered less when the Blisses were alive, but we are now in a decade when Dumbarton Oaks is on its own in the academic community", he says. He recognizes that many members of the Dumbarton Oaks staff do not know Harvard and see themselves as a small dependency of a distant, powerful institution where grey men are making decisions about them. In reality, he says, Harvard is a very decentralized university and there is no one up in Cambridge, Massachusetts, who wants to stop Dumbarton Oaks running its own show.

Sexuality degrees offered

STANFORD

An institute in San Francisco has passed a rigorous examination by state officials in California to become the first higher education institution in the United States to offer state-approved advanced degrees in human sexuality.

The state Office of Private Postsecondary Education also approved the teaching of a professional diploma by the institute which is called the Institute for Advanced Study of Human Sexuality.

The Office of Postsecondary Education was given new powers by the California legislature last year to protect the public from educational charlatans in the area of private higher education.

In the case of the human sexuality institute, the office spent several months examining the institute's curriculum, administration, business and financial standing, and legal structure.

The institute will offer a master's degree in human sexuality and three doctorates: a Doctor of Arts in human sexuality, a Doctor of Philosophy in human sexuality, and a Doctor of Human Sexuality.

The courses cover three broad areas: sex education (how people learn about sex), sex research (a history of sex including cross cultural studies), and sex dysfunction (problems of sex counselling and sex therapy). The PhD is research oriented; the Doctor of Arts offers a general background; and the Doctor of Human Sexuality is clinically oriented. The degrees involve course work and a dissertation.

The institute has 78 students enrolled in the higher degree programmes. The average age of the students is 38. Most of them are in mid-career and many of them are doctors, psychiatrists, nurses, clergy, teachers, and social workers. Seventeen students are from overseas, mainly from Britain and France.

There are 15 full-time and part-time faculty members; several have research backgrounds with the Kinsey Report and Masters and Johnson.

Students are currently being enrolled for the professional diploma in sex therapy and sex counselling. About 100 students are expected in the first course.

The president of the institute, Rev Dr R. T. McIlvenna, a Methodist minister, says the institute's aim is to help overcome the "woeful lack of professionals who are academically qualified in the study of human sexuality".

"The institute is not a sex lark", Dr McIlvenna said. "Unfortunately, sex tends to be viewed almost exclusively as an act, not as knowledge. We are attempting to correct that by providing knowledge."

The institute claims to have "the most learned" collection in the United States of films, books and art on sex. It also has a basement room full of pornographic films.

Girls choose engineering

An increasing interest in engineering is evident among female undergraduates at Stanford University. Of those planning to enter Stanford as freshmen this fall, nearly one in ten women list engineering as their first choice among six academic fields. This is three times the proportion of women who listed engineering as their first choice five years ago.

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South Africa

Salary snub to university staff

from Martin Feinstein

CAPE TOWN

An eight-month old salary gap between universities and other higher education institutions has been interpreted as a snub to university status, and the Department of National Education is under increasing pressure to review the shortfall.

The gap dates from January, when the government overhauled salary structures at schools, teacher training colleges and technical colleges with an average 5 per cent increase but left university pay unchanged. Now universities are an average 9 per cent behind on the government qualifications-based sliding scale.

At its first meeting this year, the Committee of University Principals expressed concern at the gap and agreed to press the DNE for equal pay for all teachers in higher education.

After a discussion in March between universities, the DNE and the Treasury, the Cabinet advised the CUP that revised salaries "were under examination". The CUP has since adopted a wait-and-see attitude.

Surprisingly, Afrikaans universities are leading the wage campaign. Only two university councils—at Pretoria and Durban—voiced their individual misgiving. A strong Pretoria resolution expressed to the government its deep concern "at the disregard not only of the status and prestige of the university when the salary structure was revised. But also in neglecting to view and treat education as a whole in this respect".

The resolution called for "immediate removal of the salary gap."

Natal followed suit with a resolution supporting Pretoria but suitably toned down after the Cabinet assurance.

A further complication is that the Government does not publish teachers' pay scales. Even the President of the Association of University Teachers, Professor Moelwyn-Hughes of the University of the Witwatersrand, is unsure of the precise size of the salary gap he is working to remove.

Professor Moelwyn-Hughes says the AUT was trying to arrange a meeting with the Minister of National Education, Dr Piet Koornhof, as soon as possible.

The AUT is still unsure of the roots of the gap, but a source close to the talks between the university advisory council and the DNE said a bureaucratic foul-up was the cause. Training and technical colleges, schools and universities each fall under a different sub department, and uncoordinated salary reviews at the beginning of the year left universities behind.

Mr Michael Savage, chairman of the staff association at the University of Cape Town—where Vice-Chancellor Sir Richard Luyt is in the forefront of negotiations—said of the issue "We are very very confused. What we do know is that it is far more profitable for someone to teach at a training college than a university. And someone with a PhD in history would earn far more at a government school than a university".

The association set the end of August as a deadline to go public with their grievance, setting off a possible chain reaction on other campuses.

The final say rests with Finance Minister Owen Horwood. There are fears that the minister—who was principal of the University of Natal for three stormy years in the late 1960s—has taken offence at the universities' attitude.

New Zealand

Union sells office to cover loss

from Lindsay Wright

WELLINGTON

The New Zealand University Students' Association (NZUSA), facing accumulated losses on its travel business, is to sell the building it bought two years ago as its national offices.

A special general meeting of the association told the national executive that it wanted the commercial operations of NZUSA scaled down and the focus of attention more clearly directed to student needs.

With a business turnover last year of some $3m, the Student Travel Bureau's accumulated loss, variously estimated at between $50,000 and $90,000 and subject to negotiations with the Australian union's travel division, was now unduly large, according to the bureau's director, Mr David Cuthbert.

The simple explanation, said Mr Cuthbert, is that last year's sales failed to meet expectations as business dropped some 30 per cent on the 1976 figures. Determined to protect its staff, the association kept them on when the financial indications clearly called for staff reductions.

Proceeds from the sale of the association's building, worth about $150,000 on the open market, and from the sale of a small publishing enterprise and a small travel company in suburban Wellington, should more than cover the travel losses.

Meanwhile, the Student Travel Bureau will continue to operate by concentrating on charter flights. The ticketing work formerly handled by the bureau has been taken up by bank branches on the university campuses.

NZUSA, which first rented its own office space in 1938 some nine years after its formation, has had five rented premises in Wellington since that date, moving each time the staff numbers became too high for its current offices.

The sale of its building will not necessarily mean another move, however, because the association's continued tenancy is a condition of the building's sale.

Israel

Fund set up to help industry

from our correspondent

JERUSALEM

The planning and grants committee of the Council for Higher Education has taken an unusual step in setting up a fund to encourage university scientists to increase research activity which is likely to help industry.

The committee had hoped to find natural financial partners for the fund in the Ministry of Industry, Trade and Tourism and the National Council for Research and Development but this was not to be, and the committee set the fund going with an initial allocation of six million Israeli pounds.

The chief scientist of the ministry and the director of the NCRD have nevertheless accepted invitations to serve on the board of the fund. Other members include a leading industrialist; a member of the Israel Academy of Sciences and Humanities who is chairman of the board; and three representatives of the committee.

The door is open for industrial organizations and other bodies to become partners.

The main objectives of the fund are to support research projects in the sciences and engineering that have an applied technological potential but have not reached the stage of industrial development, and the creation in the universities of centres of expertise which will facilitate the adoption and application of new technologies important for Israel. The fund will encourage interdisciplinary and inter-university research projects as well as cooperation between universities, industry and government research institutes.

Research grants will be awarded to specific projects carried out in Israel presented to the fund through the universities. The projects will be screened by committees of experts, aided where necessary by referees, who will follow the progress of the research projects approved.

Denmark

Temporary ban on new teaching jobs

COPENHAGEN

The Danish Education Ministry this month announced a temporary ban on the employment of new teaching staff for the humanities faculties of Denmark's universities until August 1979.

Until this deadline the creation of new jobs will be allowed by special dispensation only.

In a meeting with the deans of the humanities faculties and university chancellors, the Board of Higher Education put forward a plan under which vacant existing staff positions can be refilled for a year.

The compromise plan will not affect part-time staff, and should not have any significant impact on overall employment. University representatives indicated broad acceptance of the board's proposal that superceded an earlier directive from the Education Ministry for Universities.

Holland

Pressure to change courses

from John Richardson

THE HAGUE

Education Minister Dr Arie Pais has put more pressure on universities to change course structures in a policy statement on the likely budget allocations of Dutch universities for the period 1979 to 1983.

The document has led to important discussions between the individual universities and the government.

It contains proposals which the universities have little choice but to accept. Briefly, with pretty much the same resources, 30 per cent more students than in 1977 must be accommodated on university courses by 1983, the present staff research input must be maintained, the time allowed to academics for tasks other than teaching and research is to be cut from 14 per cent to 12 per cent and through a lowering of the average personnel costs, funds will be freed from which Guilders 12m (£3m) is to be reserved for new projects to be undertaken by the so-called "small institutions of higher education".

The statement was the result of detailed discussions which took place in the first half of this year between the ministry and the universities on the basis of the boards of governors' own development plans.

According to projections based on these plans and all available data regarding the present structure of higher education there will still be a need for at least 11 faculties to be subjected to "temporary" *numerus clausus* restricted entry regulations in 1983.

Dr Pais finds this to be an undesirably large number of restricted study choices in a situation where all who reach pass level in their higher secondary leaving exams are legally entitled to study in the universities.

He argues that during 1979 to 1983 changes must occur in line with his policy statement *Mass Higher Education*, which earlier this year advocated that four-year first degree courses should be followed by two-year post graduate programmes for the most successful 40 per cent of the graduates. This new structure should replace the present university courses which, on average, take seven and a half years.

After considering requests from the Catholic University of Tilburg, the Erasmus University of Rotterdam, and the Technical University of Twente at Enschede, the Minister is willing to approve the setting up of new faculties in these three institutions.

Tilburg is to be allowed to develop an arts faculty, Erasmus a social history faculty, and Twente a faculty of applied education. The degree courses in these new faculties must from the beginning be four years.

Technology is all-important in today's Iraq. Dilip Hiro continues his survey of Middle East campuses

Science comes first

Iraq is today paying far more attention to mastering the intricate mysteries of Machine than swelling the full meaning of the Word of Allah, as revealed in the Koran.

Six years ago, the religious colleges, with a total student body of about 2,000, were as popular as the technical institutes. Now the strength of the religious colleges is down to about a twelfth that of the Foundation of Technical Institutes.

The fast-growing emphasis on technology and science is outstanding. For example, of the three assistant presidents of the University of Baghdad, one is concerned exclusively with scientific affairs.

The majority of the 14 colleges affiliated to Baghdad University teach science and technology. In addition, a special University of Technology was set up in Baghdad three years ago.

Surprisingly, women are already an important part of Iraqi university life. Last year half as many women enrolled at a university as men; a ratio that leaves many Western countries behind, not to mention the Arab ones.

Another notable aspect of higher education in Iraq is that the National Union of Iraqi Students has a high status both on the campus and outside. A representative of the NUIS is appointed to the management council of a university college as well as that of a university. Outside the campus, the NUIS is dove-tailed into the



Study of the Koran is losing ground to science

organizational structure of the ruling Arab Baath Socialist Party.

Arabic is being developed with great energy and speed as a language for teaching science, engineering, agriculture, and even medicine. A decree to this effect was issued by the Pan-Arabist regime of Iraq in October, 1976. And already, all the science and technology colleges (except those teaching medicine) have replaced English with Arabic in their first year classes.

This required immense effort and organization—especially in translating textbooks into English—but it was accomplished on time. And the translating effort is continuing so as to ensure that the Iraqi scientists and technicians do not fall behind the rest of the world.

But this does not mean that the teaching of English is being neglected. Every university college insists that a student (who has had eight years of English at school) must study English for four hours a week, and take at least one subject in English.

In fact, so many university students wish to join the English classes run by the British Council in Baghdad, that the council has had to issue only a limited number of application forms and introduce a "first-come-first-served" basis. Last year some 3,500 students took these classes.

The stress is not now on teaching literary English from books but on "service English". The British Council is lending its expertise to the Institute for Development of English Teaching in Iraq, founded in 1971 to produce a library of books conceived, written and published in Iraq, and based on Iraqi material.

The drive towards self-sufficiency has become almost at the end of the process of rationalization and expansion of higher education that began soon after the overthrow of the monarchy in 1958.

Once Baghdad University was put on a firm footing in 1961, the Mustansiriyah College in Baghdad was upgraded to a university in 1967. Universities were then established at two-year intervals at Mosul in the north, Basrah in the south, Suleimaniyah in the Kurdish region followed by the University of Technology in Baghdad in 1975.

Now some 87,000 students are enrolled at these universities and thirteen higher institutes of technology, affiliated to the Foundation of Technical Institutes; and six religious colleges. Baghdad University claims the largest campus with students (over 33,000), and the largest colleges, the smallest (66).

University education is free. Each student pays no fees, gets free board and dormitory accommodation, and a grant to cover the cost of books. The university is open to all those who have passed their baccalaureate either in arts or science.

Applications are processed by a central body which directs the student to a faculty according to his or her grades. The rank of a faculty is determined by the priorities of the national plan.

Because of the emphasis on industrialization, and self-sufficiency in food, the best students—those with marks of 90 per cent or more—are now being allocated to the engineering colleges; and the second best to engineering and technology. Moreover, the system does not discriminate between sexes, many women finding themselves in the engineering and agricultural colleges.

All students are given free education for two to three lessons a week. This means basically that all the ideology of the ruling Arab Baath Socialist Party.

Formal political education of students began in earnest in 1974, the year when the NUIS was regraded.

With 1.5 million members, aged 15 or more, the NUIS is a powerful organization. It is supervised by a member of the Revolutionary Command Council, the highest body of the Baath Party, and is allocated generous economic strength". He concluded: "We advocate the revolutionary spirit of daring to think and speak. It does not matter if we differ."

Iraq's NUIS members elect their officials every two years but a conference takes place annually. Another of its tasks is to issue a slogan—"Volunteer in the service of the National Progress Plan".

Every year, thousands of university students join work camps to pave roads, dig water channels, construct buildings, and pick cotton. Among the achievements of this voluntary effort is the building of a new village for 35 landless Egyptian peasant families about 20 miles from Baghdad.

Emancipation of women is an important part of the Baathist philosophy and practice: women are active not only in shops and offices but also in the Popular Army, the civil defence force. Yet only one of the 17 executive committee members of the NUIS is a woman; and the Baathist leaders invariably address their audiences as "Brothers and Sisters", never as "Brothers and Comrades".

Pan Arabism—another ideological aspect of the Baathist ideology—has already had a significant impact on student life. It has caused the medium of instruction in science, engineering, and agriculture to be changed from English to Arabic. It has made Baghdad the headquarters of the two-year-old Confederation of Arab Students, the coordinating body of the students' unions from all the Arab countries.

In short, both the students' organizations and universities of Iraq are stamped with the ideology of the Arab Baath Socialist Party. And the students share with such institutions as the trade unions, the party and the military.

China

Doors to the West open wide

Chairman Hua breaks down barriers with trips to Romania, Yugoslavia and Iran, China's universities are encouraging foreign students. Robert Aitken reports







The successors of Chairman Mao (left)—Hua (centre) and Teng have established new goals in education

his appearance at the recent national education conference in Peking, Vice Premier Teng Hsiao-ping has confirmed his role as the driving force behind the profound changes taking place in China's education system.

Teng opened the conference with a speech that went further than anyone so far in rejecting the policies of the last 10 years and setting the tone for the new line, namely a complete overhaul of education as the key to acceleration of the national economy.

The question now is, can China carry through such changes to meet enormously ambitious targets it has set for the year 1985, targets which are unofficially reported to include a doubling of the present grain output and a trebling of steel production?

Teng delivered an effusively warm welcome to China's nine million teachers, and went so far as to extend the party's "regards and respects" to them, and its "particular regards and respects" to primary school teachers whom he likened to "gardeners tending the successors to the revolution."

The teachers' political and social status must be raised, he said, and they must command the respect not only of students but also of society as a whole.

Teng promised changes in the working conditions for university teachers—most of them live in dormitories like their students—and a rise in their wages. It was typical of his belief in the promotion of material incentives generally.

Teng, possibly to assuage those on the left in the power structure who consider this unrevolutionary and too bourgeois, he acknowledged that these prizes could not be given indiscriminately because of China's limited economic strength". He concluded: "We advocate the revolutionary spirit of daring to think and speak. It does not matter if we differ."

Teng's speech—his third major speech on education in recent months is significant, both for its restoration of intellectuals to a key role in Chinese society, and increased emphasis on examinations, the downgrading of politics and the promotion of experts as fundamental new tenets of education.

Teng expressed very much the changed mood of China which impressed all visitors the many thousands of visitors currently being allowed under the new open door policy towards the Western world. Some 150,000 foreigners are to be admitted this year, three times last year's figure. Most of them are Japanese and Australians, but an increasing proportion will come from the United States and Western Europe.

In particular, the Chinese are very very hard to impress the Japanese, as normalization of Sino-American relations moves closer and as Russians are increasingly painted as Public Enemy Number One. The waiting list for Chinese visas in the United States is said to be around two million.

Recent visitors include teams of American and West European nuclear scientists, being flown around the country's universities and research establishments and met at airports with limousines, unlike other travellers who are ferried about in buses.

The reason for all this activity is two-fold, and it dove-tails perfectly with the Teng-inspired plans for education. China is anxious to earn as much foreign currency as it can to help pay for the programme of modernization on which it has embarked.

This has involved both a revamping of the internal education system and, in the much resurrected saying of Chairman Mao, "making the past serve the present and things foreign serve China."

Per foreign visitors, the emphasis is now shifting away from criticizing, per se, the "gang of four" whose arrest in October, 1976, was followed by a year of official vilification and public confusion.

Instead, the new goals now firmly entrenched in the name of "wise leader" Chairman Hua Kuo-feng are being extolled, although the "gang" is still very much the scapegoat for everything that went wrong during the Cultural Revolution.

At the education conference in Peking, for instance, 6,000 delegates were told of plans for bringing in uniform university entrance examinations and text books throughout the entire country.

As well as taking over charge of this from the provinces, the Ministry of Education in Peking will coordinate the training of teachers, whose ranks and titles—professor, lecturer, tutor, principal and so on—have now been restored.

Schools and universities have responded enthusiastically. Students and teachers alike talk about the abolition of cramming, rote learning and "spoon feeding" as teaching methods. From now on, they say, almost echoing Teng, the more emphasis on "thinking by ourselves and thinking independently". What this means in practice, no one seems willing to elaborate.

The promotion of science and technology and foreign languages has almost become an obsession. Cinemas, radio and television all feature programmes on science at prime listening and viewing times.

English has replaced Russian as the most favoured foreign language, and the radio is extensively used to broadcast English classes to the masses. It is now compulsory for all science students to learn English, although not vice versa.

Postgraduate studies, suspended for almost a decade, are starting again. Courses thrown out of universities because they were too bourgeois are being reintroduced, including psychology and industrial psychology and, at postgraduate level, Buddhism, the history of religion and French literature.

Increased numbers of foreign students are actively being sought to enable China to send more of its own students abroad on exchange.

At Peking University, the country's most prestigious campus, these changes have led to friction between the new and the older students.

The latter, who arrived on campus when political purity was still pretty much the sole criterion for entry, have been subjected to campaigns by their younger colleagues accusing them of being ill-equipped to achieve good results; in some cases examinations are not being held at all for third-year students because, it is said, they are not considered to have sufficient knowledge; they are being made to



Blame is still put on the 'gang of four'

suffer for their university's former support for the "gang of four".

The older students—and many of them are now in their late twenties, having spent years doing manual labour before going to university—are equated with the once famous but now disgraced Red Guard leaders, Kuai Ta-fu of Tsinghua University in Peking and Nieh Yuan-tzu of Peking University, both of whom were arrested recently after being paraded around their old campuses and criticized before meetings of students.

While representatives of that era are still feeling very publicly, many of those whom they purged are in turn being quietly restored.

Without ceremony or announcement of any kind, the president of Nanking University, Kuang Ya-ming, returned on May Day to the job from which he was dismissed 10 years ago at the height of the Cultural Revolution.

Unlike many teachers who suffered a similar fate, he was spared being sent for "re-education" and has spent the last 10 years confined to his dormitories reading books.

How much the new blueprint for education amounts to de-Maoization is difficult to judge. Mao's writings on so many subjects were so diverse that it has not been difficult for a suitable Mao statement to be plucked out of the air to justify virtually any changes.

Even now there will be big problems providing places for those with talent. At the university entrance examinations held last December, the first for 10 years, there were unofficially reported to be 20 million applicants for 200,000 new university places—less than one-third of the places available before 1966. Peking University now has less than 10,000 students, about half its pre-1966 level. Nanking University has only 3,800 students, but there are plans to build this up to 6,000 by 1981.

There is a corresponding shortage of teachers throughout China. Many older ones are still wary of returning to a profession in which they were once persecuted, while the younger ones have not yet been trained to handle the new system.

Undeterred, the government has approved the establishment of another 55 universities, including 13 colleges abolished or merged with others during the Cultural Revolution.

China's leaders are no doubt taking a calculated risk in the headlong plunge towards specialization and elitism which they have launched. It will need a long period of political stability for the new system to bear fruit.

Whether China will get this much needed breathing space, it is too early to tell: there is plenty of latent energy under the surface just waiting to be released as the slightest sign of strain at the top, as the recent past has shown only too well.

New Zealand

College drinks the fruits of its first grape harvest

from Lindsay Wright

WELLINGTON

New Zealand's universities probably contain as many connoisseurs of good wine as most of their northern hemisphere counterparts, but Lincoln College, the University of Canterbury's agriculture college outside Christchurch, has gone one step further.

This year it celebrated its centenary by serving participants in its first grape harvest since it began cultivating grape vines in 1973.

Now, with some 60 varieties of grapes and several palatable wines to its credit, the college can politely disregard the benign scepticism the project generated several years ago. The South Island of New Zealand was generally considered too cold for grapes.

Even when Montana, a major wine making company, went into Blenheim, a sheltered and sunny valley at the northern top of the South Island, and bought 1,400 hectares for grape production, heads shook and disaster was predicted by many people, especially the North Island producers. Now, Montana is into its second vintage, and Lincoln College scientists say their first yields and quality have been promising.

In charge of the college wine is Dannie Schuster whose family are Rhine winemakers and who came to the college first in 1973. "It's not a vintage year", he says, "but the Pinot Noir is reminiscent of some Burgundy wines. I've tasted nothing like it in New Zealand."

Over its 100 years, Lincoln College has been highly regarded as an enterprising centre for productive agricultural and horticultural research. It places its reputation on the mat in November this year, as a team of leading wine-tasters converge on the college, as participants in a one-day seminar on grape growing, and undertake an official tasting.

Italy

Equality for all myth exploded by survey

from Ulf Schmetzer

ROME

The Italian "mass university"—created 10 years ago under a fervent banner of Equality For All—has received a stinging blow in a survey which reveals that it has failed to break down the old campus class barriers.

The result of the survey, conducted at Rome University, showed that only 6.7 per cent of the student population came from working class families whose members had no educational certificates.

Instead, the bulk of the students (45.1 per cent) are sons and daughters of families in which at least one parent holds a degree, and the rest come from the "aspiring" middle classes as has always been the case.

Worse, the survey which interviewed half of Rome's 200,000 campus population discovered that faculties like medicine and law (with their lucrative professional degrees) are still dominated by the sons and daughters of the already affluent (55.4 per cent of medical students come from high income families).

Headed by Professor Franco Ferraroti, dean of Rome's sociology faculty, the survey has been a bitter blow to the future of an institution which grew out of the 1968 student riots and envisaged a mixed campus where the children of workers and peasants had an equal opportunity to study.

In order to facilitate campus access to the lower classes *numerus clausus* was abolished and the universities thrown open to anyone with a secondary education. In addition, government stipends and subsidized fees were introduced.

Now, according to the survey, these expensive innovations appear to have benefited mainly those social classes which could well afford to pay higher fees.

The survey, described as "research into the social composition of the student population", also demolished the belief that mass universities would attract students from the underdeveloped areas of southern Italy and the islands of Sardinia and Sicily.

In fact, 81.3 per cent of Rome's students are from the province of Lazio (around Rome) while only 13.3 per cent come from the south and 1.5 per cent from the islands.

The frequent cry that the Rome campus was mainly composed of working students was another myth, according to the survey. It found only 26.3 per cent of the campus population worked.

At the bottom of the survey of students with a job is medicine where only three out of every 100 students have a job in their spare time. At the other end of the scale is political science, the traditional rallying ground for left-wing students from the lower class where 57 out of every 100 students go to work.

When created, the mass university envisaged that thousands of adults would enrol to study for a degree. However, the survey found that only 6.4 per cent of the student population is aged over 30, while 83.4 per cent is under the age of 25.

The survey also ascertained that certain faculties attract specific social classes: in medicine 55.4 per cent of students are from the higher class while the middle class prefers science (56.6 per cent), philosophy (53.3 per cent), mathematics (52.7 per cent) and law (50.9 per cent).

Students from the lower class seem to prefer pharmacy, political science, engineering and economics.

Yet the social failure of the mass university, bitter as it may be to its advocates, has its roots not only in Italy's tightknit family society with its durable class consciousness or the lack of parental stimulus among students from the lower class. The government is also partly to blame.

Ironically, a long overdue University Reform Bill may finally be passed by Parliament this autumn. It envisages legislation that will iron out some of the problems but simultaneously abolish the very concept of "open universities".

Dealing with double-edged knives is nothing novel in Italy.

Drama lessons by American students at Festival Fringe

There has always been a strong student influence in the shaping of the Edinburgh Festival Fringe. The first moves at organizing it were made in 1955 by Edinburgh students and their efforts have since led to an event that is claimed to be the largest arts festival in the world.

In his recently published book, *The Edinburgh Fringe*, its administrator Alistair Moffat also credits students with "playing a catalytic part in building the Fringe's reputation for pioneering new or little performed work". Stars such as Julie Covington, Derek Jacobi, Peter Cook, Dudley Moore and many others made their first impression on public and critics while performing in college or university productions in Edinburgh.

Standards generally have risen considerably in recent years and a good indication of this was provided this year by the many American university groups.

One of the best, the University of Rhode Island Theatre, staged a group of exquisitely performed productions. In particular, *Pontifications on Pigtails and Puberty*, a work constructed by its cast, Chel Chenier and Peter Frechette, and director Judith Swift, provided one of the highlights of the 1978 festival. A reflection on the Catholic experience of growing up in America, it offers immediate comparison with Mary O'Malley's hugely successful *Once a Catholic*, and it must be said that the American work is by far the stronger and more impressive.

Pontifications paints a starker picture, stressing that the impact of seminary, convent or Catholic school education often induces guilt and repression which lingers on throughout adult life.

The university also staged *Sexual Perversity in Chicago*, by David Mamet, whose *American Buffalo* was recently put on at the National Theatre, and although it lacked the personal conviction of *Pontifications*, the play was strongly performed. But it would be unfair to ignore British student drama in favour of its American counterpart—after all, those who cross the Atlantic to come to the Edinburgh festival are scarcely likely to bring anything but the very best with them.

On an equal standing was the Oxford University Theatre Group whose late-night revue was presented in true Fringe tradition—in a poky, back-street hall with narrow wooden seats. Fortunately the material was not in this same traditional mould and instead of watching a couple of spoof Top Ten songs and some old Monty Python sketches, we got an elegantly amusing production performed by a very talented group.

Slightly less successful was the National Student Theatre Company in *Privitus, Privitorum, Privet Hedge*, a new play by Angie Farrow, which opens later this month at the Almost Free Theatre, London. Certainly the work is highly original and has occasional moments of high surrealist comedy as it chronicles the manoeuvring and word games played out in an archetypal school classroom where pupils are unimportant and the only real concerns are the school register and imagined immorality in the classroom.

But why the strange symbolism? Why did the characters start marking the register on lettuce leaves and sharpening carrots? Was it a sudden bout of scholastic concern for ecology or, more probably, was the author trying to indicate that modern teachers carry out actions without reflection?

For those with strong stomachs there is Howard Brenton's *Christie in Love*. Performed very ably by Nottingham Theatre Group, a company of local students and graduates, the work tells the story of Reginald Christie, famous mass murderer of the 1960s.

Decidedly more tasteful, but less probable, is Newcastle University's *In the Blood*, written and directed by Debbie Horsfield. Set in a police cell, the play centres on the unlikely premise that two female football hooligans are liable to meet a former soccer star who has fallen from grace.

The dramatic offerings on the official Festival came a decided second best to many Fringe productions, particularly those of Rhode Island University. The Malaya Bronnaya Company presented Gogol's *The Marriage*—in Russian. Attempts to aid understanding by using simultaneous translators which merely hurt the ear only added to an already confused evening. The Royal Shakespeare Company gave us Trevor Nunn's version of *Three Sisters* in three and a half hours of gloom at Daniel Stewart's and Melville College gym.

Suzanne Bertish as Masha gives a typically electric performance which saved the production from complete disaster.

Of course, the drama content of the Edinburgh Festival has always been the first to feel financial cuts imposed by city councillors too stubborn to appreciate the cultural and financial value of the event. Hopefully, the new festival director John Drummond will rectify this and certainly his promise to hold major theatre workshops featuring major international directors will be an extremely valuable venture for the invited Fringe groups, who will no doubt include a good representation of student companies. If nothing else the move will be a step in the right direction.

Robin McKie

Bath sport scholarship scheme goes swimmingly



Britain's first sports scholar, Bath University undergraduate Kevin Hedges, takes a break from biology and tests life in broken wa...

Britain's first sports scholarship scheme, at the University of Bath, is about to start its third year. Bath has awarded two scholarships this year and a third is expected. Two previous awards were made, one each in 1976 and 1977.

Meanwhile the University of Liverpool has announced its first sports scholar, law student and champion golfer Janet Melville. The University of Stirling is also interested and has recently been investigating Bath's pioneer scheme, whose aim is to give scholarship holders a chance to develop their sporting prowess to a high level without impeding their academic progress.

Only those who have already reached international standard or can produce firm evidence they are likely to if awarded the scholarship are considered. They also have to meet the university's exacting admissions requirements. If chosen, their academic course is extended by one year so they can arrange their studies to fit in with training and competition.

The extra year's costs—fees, living expenses, travel, coaching and equipment—are met from the awards given by private companies. So far Littlewoods, the pools, mail order and store firm, Campari, the sports goods manufacturers, and Office Cleaning Services have given scholarships, now worth about £5,000.

Details of the academic and athletic programme are worked out for each student. A careful check is kept on progress in both fields, and adjustments made when necessary.

The man behind it all is the university's Yorkshire-born director of physical education, Tom Hudson. With a powerful build to match his character, he has worked with determination to make a success of the scheme. It has inevitably added heavily to his work load, which reaches 78 hours a week during term time.

He wants to see the scholarship scheme expand, perhaps to 20 at Bath alone, and he is keen to see other universities take up the idea. "This university is principally for science, technology and the social sciences. Anyone who wants to read history, for example, is obviously excluded from the scheme."

The limiting factor is money. Mr Hudson and his colleagues are deeply grateful to the firms which have come forward with scholarships so far, but eagerly hope for more so the momentum can be continued through into 1979/80. They are also looking to public corporations and the Government for help. The ideal would be for a commitment of up to £50,000 from one company to ensure a smooth continuation of the scheme.

Mr Hudson says he is "more than pleased" with the way things have progressed. The first scholar, white-water canoeist Martyn Hedges, was seventh in the 1977 world championships and first in the British championships this year. He is studying applied biology, and, as Mr Hudson told a conference earlier this year, his academic progress was considered by his tutor to be entirely satisfactory.

The second, golfer Malcolm Lewis, has also had a string of victories and strong performances in British tournaments. He was competing in the French championships last week before going on to Greece. He, too, has coped well with his university work.

This, Mr Hudson believes, vindicates the argument he put forward when he initially approached the university for permission to run the scheme. There were fears then that it would be difficult to reconcile demanding sporting activities with academic work. But the close liaison between course tutors and the director has paid off.

"We have had a tremendous amount of cooperation from our colleagues in all departments. This has been a university scheme, not a Tom Hudson scheme. Everyone has contributed from the vice-chancellor, who is giving his support, to the cleaner who is always interested in the students", Mr Hudson says.

The two new scholars for this year are both judo players, William Jackson is unusual in that he already at Bath when he applied for the scholarship, halfway through his horticulture course. Black Entwistle, who represented Britain in the European championships in 1975, resigned from the team to concentrate on her studies. With the scholarship to help her there is a strong probability she will be able to compete again at nationally without hindering her university career.

Mr Hudson knew that many highly promising athletes with international potential gave up to concentrate on their university work. He and his colleagues at Bath hope that through the generosity of sponsors like John Moores, founder of the Littlewoods empire, a compromise can be struck, instead of giving up, students can be helped to carry on competing in the belief that their academic standards should not suffer.

But there are no saving colleges for a sports scholar who fails to make the academic grade despite all the careful monitoring of his or her tutors. The same fate awaits them as any of their fellow students who fail first-year exams.

There were 40 applications for the first scholarship in 1976, the following year, when the news had got round of the university's exacting demands, there were 15. This year there were 16, of whom 15 were "academically respectable".

Not surprisingly, in view of the wide-spread reputation gained in 1976 and 1977, most lend applications to Bath as students are probably attracted by the excellent sports facilities. Seven applicants were eventually shortlisted and of the three chosen failed to meet the grades demanded at A level, hence the delay in naming the recipient of the third award.

Sports represented among the applicants have included archery, judo, cycling, badminton, squash, rowing and athletics.

Heads of departments are closely involved, right from the initial interview. Some scholars need time off, perhaps to prepare for and compete at the Olympics or other international competitions. Their work programme must be structured so that this leave can be given without harming it. Only two of Bath's schools have been involved so far. Mr Denis Howell, Minister for Sport, has welcomed sports scholarships as something he has advocated for a long time. However, many are disappointed that it has been left to private industry and the universities to make a start on the idea without direct government aid.

Another approach is the new degree course approved by the CNAA at Crewe and Alsager College of Higher Education. Dr Ken Burwitz, a sports psychologist, is one of a number of academics who bitterly resent accusations that greater emphasis on sport will encourage hulking boneheads who apart from their athletic prowess would be totally unsuitable for an academic career.

Potential students for Dr Burwitz's course must have A level levels and documentary evidence of an interest in and experience in sport. In addition they face a rigorous selection test.

David Johnson

You may or you Maynooth

The ironic Irish view of their RC seminary mirrors a bitter truth for academics as the bishops retrench after the Vatican Council. Paul McGill reports

...the High Court action between two ...mmissed lecturers and the trus... of St Patrick's College ...ynooth, is not the first and is ...kely to be the last case of a ...spute in the college over appoint...nts and dismissals. Indeed there ...ve been enough incidents over ...e past few years to cause dis...ffected members of the acca... staff.

...art of the problem at Maynooth ...at it is evolving from being ...clusively a Roman Catholic ...minary to a dual institution in ...ding the seminary and, most ...ople hope, an independent sec... university. Yet, in its ethos and ...thod of government—by a body ...nsisting entirely of Catholic ...ishops—it retains all the restric... ...es of a religious institution.

...Maynooth, known officially as ...yal Catholic College, was ...unded by a law passed in 1795 ...r the better education of per... ...ot professing the Popish or ...oman Catholic religion". For the ...st 22 years of its life, it admitted ...y students but it remained a ...minary thereafter until it began ...mitting lay students again in ...66, partly because declining ...ocations threatened the viability ...f the college. The majority of ...udents are now female and non... clerical.

...Key statutes were promised to ...ake account of this new develop...ent, but they have not yet been ...greed by the trustees and many ...ey even have been drafted. Vic... to the High Court case may ...courage further delay since the ...rustees could argue that there is ...ittle need for them to change the ...stem of government if they can ...ntinue to rule the secular univer...ity under the old one.

...Nor has there been any apparent ...hange in the philosophy of the ...ollege, namely that it exists for ...he promotion of the Catholic reli... rather than the pursuit of ...nowledge. The guiding principles ...hich apply were spelled out by ...he then president of the college, ...onsignor Jeremiah Newman, now ...ishop of Limerick, almost five ...ears ago.

...He commented that some con...emporary Catholic theologians, ...onfluenced by the intellectual ...ables of the day, were unduly ...riented towards a purely critical ...nd analytical study of their sub...ect that did nothing for Christ... ...ity as a religion.

..."If it is permissible to note that ...our Marxist thought today lacks ...s return to a strong revolution... ...deology, it is even more so to ...ote that what the Church needs ...s theology of positive content ...nd teleological purpose rather ...han of disinterested, so-called ...cientific, positivist analysis. Sacred ...cripture is not just a text", Mgr ...ewman said.

...The college has been attacked ...om the Right by those who argue ...at there is too much deviance. ...ve years ago, it was referred to ...s a cesspool of heresy" and the ...onditions were made that ...everal of the students are ...embers of the Communist Party" ...nd that it was "one of the most ...productive heresy-factors in the ...hole of the Catholic Church."

In 1974, a student at the college put forward a rather different view. "As recently as two years ago", she wrote, "all leadership and inspiration emanated from the seminary. However, a purge conducted by the 'powers that be' in the seminary of all its *non seminary* elements.

"All those who had the vision and ability to make Maynooth a living, thinking university and seminary were either dismissed or exiled to such distant places as Rome. Since then, most clerics have preferred to remain anonymous rather than risk coming to the unfavourable notice of their bishops."

The suggestion that there has been a purge is strongly denied by the college authorities, but the High Court case involving Dr P. J. McGrath and Mr Malachy O'Rourke is exceptional only because the two men, supported by the Irish Federation of University Teachers, were willing to fight it publicly rather than quietly accept their fate, as several others have done.

The lecturers were members of two groups that have had high drop-out rates in the last few years—they were laicised priests and secretaries of the Academic Staff Association, the local branch of IFUT.

Seven Maynooth priests have been laicised since 1974, none of them are still teaching there and only one left voluntarily. There have been five staff association secretaries in the last 10 years; the first three (all laicised priests) were forced to leave, the fourth is still there and the latest, Ms Mary Fitzgerald, lost her job only this year.

Ms Fitzgerald had been a temporary lecturer in English for two years when she applied for a junior lectureship in the department. A board of assessors, consisting of the college president, two internal professors and professors in English at University College Dublin and the New University of Ulster, recommended her jointly with an applicant from Birmingham for the two posts that were vacant.

According to the assessors' report, she was chosen "for the exceptional qualities she has shown as a teacher of undergraduates and for her particular flair for devising new programmes and courses for English studies in the university." They also expressed satisfaction at the academic level of the applicants and the high quality of the eight people who had been interviewed.

The assessors' recommendation was accepted by both the faculty of arts and the academic council, but it was rejected by the college executive committee, a body on which the trustees have a majority. The Birmingham University applicant turned down the junior lectureship he was offered. The trustees then upped the post from junior to senior lectureship level, but he turned it down again. The person who was number three on the original assessors' list was passed over and a junior lectureship given to number four.

At this stage, Ms Fitzgerald has still not been offered a permanent post and her temporary position has not been renewed. Since the vacancy is at senior lecturer level, she is probably not eligible even if it is advertised again.

In a letter to the college executive committee, [illegible] Maynooth English department, Rev Professor Peter Connolly, says he was "shocked and extremely puzzled" as to why the council did not follow the advice of the advisory bodies that had considered the matter. He argued that "in every respect as a teacher she (Ms Fitzgerald) has been quite outstanding—in her availability to students and devotion to them, in tutoring and lecturing ability, in collaborative planning of courses within the department and in congeniality of temperament with every member of it".

The college president, Rev Dr Michael Olden, said he would not like to comment on the suggestion that Ms Fitzgerald's non-appointment was peculiar and that he could not say that non-academic issues were taken into account. "If somebody is recommended, that does not automatically mean they will be accepted. I couldn't say why members of the college executive council vote as they do."

Two years ago, several hundred students boycotted lectures in protest at the non-appointment of Rev Vincent McNamara as lecturer in moral theology, even though he had been teaching part-time for five years. An elderly cleric was appointed instead, without the formality of interviews or assessment boards. The ending of the boycott several days later was claimed to be unconnected with the fact that three bishops had written to their students suggesting they might be expelled if they did not return to classes.

In the same year, the academic staff association protested that staff views had been ignored when Dr Michael Olden was appointed vice-president. He had not fostured on a staff ballot in which Dr Edna McDonagh came first.

The high water mark of staff discontent was March 1977, when they voted overwhelmingly for a one-day strike—the first ever in an Irish university—in support of McGrath and O'Rourke and to demand a meeting between the college and the Irish Federation of University Teachers. Seven non-IFUT members signed a letter to *The Irish Times* dissociating themselves from the strike, as did seven union members, some of whom had previously voted in favour of the strike.

The atmosphere at the college deteriorated as a result of the strike and to some extent, it is still divided along the lines of those who supported and those who did not support it.

"In an institution like this there will be disharmony," said Dr Olden. "The strike has left a certain scar, which is regrettable, but it doesn't extend over the whole work of the college. This has never been a cosy place—there have always been divisions, but it went side by side with a healthy, manly, spirit of cooperation. People who disagreed on the strike are not inimicable to one another; there is no spirit of vindictiveness, though there is disagreement."

Others failed to make an example of those who went on strike and reward the loyal. "It seems plausible to me that the bishops are showing their power for the sake of it", commented one senior academic in the secular university.

"I believe the atmosphere has got worse", added Dr McGrath, who won his court case against the authorities. "The trustees will put into positions of responsibility only people who do what they are told, not people who have a mind of their own."

Adherents of this view point to promotions in the college since the strike. Last September, for example, Rev Enda MacDonagh tied with Rev Liam Ryan in a staff vote for president, with Dr Olden third. Dr Olden, one of those who opposed the strike, was appointed. The other two are active members of the staff association and IFUT.

Two months later, Rev Ryan topped the poll for one of the vacant vice-president posts and Rev Gerry Meagher headed the vote for the other. In both cases, the person who came third was appointed: the successful men had signed the letter disassociating themselves from the strike. Rev Ryan already held the post and this was the first time ever a vice-president had not been reappointed; so he lost the presidency and the consolation prize of the vice-presidency.



Dr Michael Olden: "This has never been a cosy place."

'The McGrath case shows how incredibly little intellectual freedom they allow you'

Dr Olden claimed that it was "very wrong to say that all appointments here cause controversy. We have appointments that are very satisfactory". In the instance of his appointment as president, he argued that the difference between him and the others in the staff poll was small and that, in a complicated place like Maynooth, the emphasis placed by different people is different. His own background in the seminary, mostly of a non-academic nature, may have been important in his success.

Although any individual appointment, promotion or dismissals can be explained, when they are all put together, and when senior members of staff assert that a problem exists, the big question of academic freedom arises. The High Court ruling that laicised priests can be dismissed from the secular university, regardless of their teaching or research ability, compounds the problem.

"Conditions at Maynooth are very good for research and publications", asserts the college president, Dr Olden. "Each man in his department has complete freedom. Only three or four people would complain that they were frustrated. The vast majority do not feel bedevilled by somebody breathing down their neck."

Dr McGrath believes that the situation in Maynooth mirrors that of the Irish Catholic Church generally. "There has been a retrenchment in the Irish church; it's more illiberal than 10 years ago. There was a great wave of liberalism after the Vatican Council and now they're digging back to the old position."

Another academic, commenting on the trustees' charge that McGrath had published writings prejudicial to the teaching authority of the Church, said: "The McGrath case shows how incredibly little intellectual freedom they allow you in Maynooth. While people say that things are improving, as far as professional staff are concerned, they are just as bad.

So what lies ahead for the college? One probability is continued unrest and repeated conflict between the authorities on the one hand and the staff association and the Irish Federation of University Teachers on the other. Further litigation, proceedings in industrial tribunals, a publicity campaign aimed at applicants for posts and direct industrial action are all possibilities. But, strengthened by their High Court success, the bishops are likely to feel even more secure in the future than they have been.

The other alternative is political activity. After all, the Government foots over the counting £1,069,000 in recurrent funds to Maynooth and over £200,000 for capital projects. The money is for the 1,166 students in that part of Maynooth that is a recognized college of the National University of Ireland.

Ironically, the size of the trustees' legal success is a disadvantage in one sense. If the issue had been left vague, the Government could more easily justify inaction. Now that the Judge has ruled that the trustees can sack staff in the secular university, regardless of the fact that it receives public funds, the case for political intervention is stronger. Otherwise, how can a Government justify the expenditure of large sums of money without any accountability to the public that provides it? And how can it justify a college ignoring public policy on security of tenure and unfair dismissals?

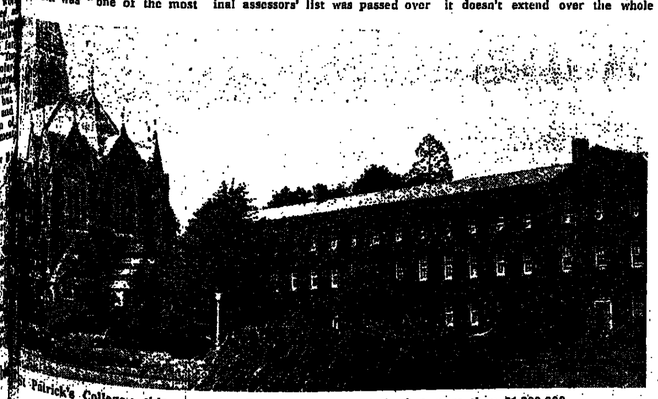
It is one thing to say that the issues involved are now more stark, quite another for an Irish Government to challenge the Catholic hierarchy in public. There are votes to be won in reducing unemployment and cutting inflation, for fewer to be won in protecting academic freedom or even in asserting the principle that the public should be involved when public money is being spent.

The existing National University of Ireland colleges in Cork, Galway and Dublin are to be made independent, but the Minister for education has hinted that Maynooth may not follow the same road. That would probably suit the trustees, since it appears they can run the whole show under the present structure and they have the added advantage of owning the ground and buildings, public contributions to their construction notwithstanding.

If the university remains linked to the seminary, the position will be thoroughly anomalous. Within 10 years or so, all the clerical teachers in the secular university will have retired, leaving it entirely lay. The case for a college with lay staff, predominantly lay students, entirely funded by the Government remaining under the control of the bishops will become even more derisory than at present.

The logic of the position points to independence, but the entrenched position of the trustees suggests that a favourable deal will be worked out with them. This might include a large sum of money and/or substantial representation on a new governing body, rather than four places out of 27 as a working party set up by the previous Government suggested.

Many outside and inside Maynooth will oppose any concessions to the trustees, but political reality, combined with the overwhelming desire to have a college run on academic, rather than religious lines, will probably result in a solution that is as acceptable to the bishops as it is to their opponents.



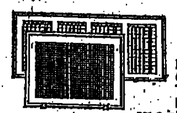
St Patrick's College: this year the Government is contributing more than £1,200,000.

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R. A. Barnett calls for a multidisciplinarian approach to the central questions

Time for theory—the neglected area of research

On July 19, 1974, an article appeared in *The TIMES* written by Roy Niblett, emeritus professor of higher education at the Institute of Education, London University. In that article Professor Niblett pointed to certain areas of higher education research which he believed had been neglected. In particular he argued for "research of a philosophical sort, which seeks to uncover hidden assumptions in the very words we use to describe education and successes in higher education need to ask themselves more often what sorts of knowledge are important . . . what the function of higher education institutions in the rest of the century is to be".

Since that article nearly four years ago, how much theoretical investigation of the kind Professor Niblett called for has been conducted? The answer is obviously very little indeed.

Peter Scott suggested in *The THES* that "an institute for higher education policy" be established (March 3). Gareth Williams (March 10) rejoined that such "policy analysis requires higher education to be treated as an integral part of the whole system of education and training". Separately, Ralf Dahrendorf (March 17) suggested that "the moment cannot be far when one would wish to consider higher education as a whole all in the context of new views of the social construction of human lives".

But if any of these projects are satisfactorily to (in Peter Scott's words) "walk the middle ground between being a talking shop and engaging in futurology" they will have to be underpinned by serious work in the relevant academic disciplines, namely philosophy and sociology. Most fundamental of all, as Professor Niblett implies, is the need for analysis of our basic concepts within a sense of the social structure of modern society. But, as John Pratt pointed out (*THES*, March 24), "the major gap in policy analysis is the (general) absence of a developed and acceptable theoretical base". This is especially so for the understanding of higher education, where empirical research has largely been conducted without any serious analysis of the concepts and assumptions that have been employed.

Professor Niblett, it is true, has himself done something to redress the situation by editing a new series of books devoted to "Higher Education Today", the titles of which have included his own *Universities between Two Worlds*, and *The Sciences, the Humanities, and the Technological Threat*. A further volume in the series, *Conflict and Consensus in Higher Education*, edited by Sinclair Goodlad, arose out of meetings of working parties of which Professor Niblett was chairman. Of these it is fair to say that while each essentially philosophical in Niblett's own sense of systematically exploring the concept of knowledge in relation to higher education.

Admittedly, philosophers in the 1970s have not been entirely silent about higher education. But what little has appeared is limited in one of two ways. Either analysis has confined itself to "the university" and has tended uncritically to assume notions such as the intrinsic value and the objectivity of knowledge and to cling to an ideal of the autonomy of the university (works of this genre are John Searle's *The Campus War* and Kenneth Minogue's *The Concept of a University*). Or it has been swept up under an umbrella of education in general, without recognition that higher education poses particular conceptual problems of its own. The "philosophy of education" as adumbrated by Professor Peters unnecessarily limits analysis of higher education in just this way (while Gareth Williams seems to succumb to the same danger in respect of education policy analysis.

In short, there is no philosophy of higher education as such available at present. No one (so far as I know) has systematically confronted the question "what criteria do institutions have to satisfy to warrant the title 'institution of higher education'?"

The theory of higher education is noticeable then for its absence. There is clearly a vacuum here which ought to be filled. But what form should such analysis take? We have loosely talked of philosophy of higher education. That, given the dominant conception of philosophy, might lead us to conceptual analysis. This could provide a useful beginning.

It might be observed, for instance, that there is no logical contradiction in a former student remarking "I have attended a university (or polytechnic) but I have not received a higher education." Such a person would obviously be operating with a rather restricted concept of higher education. But the point here is that our institutions of higher education may not provide a higher education as might be ordinarily conceived. Conceptual analysis has therefore to acknowledge that the exploration of the ordinarily held concept of higher education is necessary but not sufficient, for it may diverge from the institutional reality of higher education.

Indeed, pursuing our conceptual quarry a little further, it may be argued that there is no simple concept of higher education (contrary to the claim of Professors Hirst and Peters for education in general). With additional analysis it could be shown that the concept of higher education and the justification of knowledge within higher education are contested, the debate resting (to pick up one of Niblett's points) on different assumptions as to the proper relationship between higher education and society.

This should not be surprising for higher education is more than a double-barrelled concept. Not only does it imply that something is going on above and beyond education in general (it is not just further education), but it is also instantiated in institutions as well as individuals. It is difficult to conceive of an individual having received a higher education except at an institution of higher education (again, this would not be true of education in general).

Higher education then is inescapably a concept predicating institutional arrangements. But having said that, for a full account of higher education we are inevitably led on to consider the structural relationships between higher education and society, in particular those which are a function of higher education as a producer and transmitter of knowledge. *En passant* we would be obliged to consider further fundamental concepts such as academic freedom and ideology.

One commonly accepted aim of education is autonomy (although clearly this concept too requires analysis). But if we are concerned with educating for autonomy in the context of higher education we are again led to take account of the social situation of higher education and the knowledge that is on offer within. This means a recognition of the social dimension and status of knowledge in terms of both its production and its uses. The logic of higher education therefore requires an openness and a reflexivity to both knowledge and higher education *qua* social institutions.

This kind of analytical approach goes well beyond the confines of linguistic philosophy since it requires the taking in of each other's washing between philosophy and sociology and between theory and practice. It involves a close analysis of the packages of knowledge available in higher education and its results could be fed back into the processes of higher education themselves (as Professor Niblett implies). Linguistic analysis by itself, on the other hand, leads merely into a theoretical and practical cul-de-sac (as an example see *Neutrality and Impartiality: the University and Political Commitment*, edited by Alan Montefiore, with the exception of Charles Taylor's paper, "Neutrality in the University").

This programme is therefore unashamedly multidisciplinary. It takes into account philosophy of science, epistemology, the various branches of philosophy of particular domains of knowledge (philosophy of science, of social science, of history, of aesthetics, and so on), sociology of education, and the sociology of knowledge where too there would be various subdivisions such as the sociology of science, of literature). Indeed, the philosophy of higher education might be characterized in terms of the question: what are the implications for higher education of the various theories in these other areas of inquiry?

Only by adopting such a multidisciplinary approach can the central questions and solutions be formulated. They include: What is the status of knowledge as purveyed in higher education? What interests does it serve? Can higher education be non-ideological? What are the essential requirements of a higher education in a modern industrial society? In what sense is academic freedom possible?

There has been no systematic attempt to answer these questions. The general philosophical rec[ipe] of this programme finds an [in]spiration in the work of [Ern]est Gellner but for the beginning of this kind of theory in higher education we have to look for its [in]spiration part beyond British departments of philosophy and education. Recent examples, Jurgen Habermas (ed.), *Towards a Rational Society*, and G. Edwards (formerly vice-chancellor at Bradford, who has written [a]bundantly on the sociology of knowledge and society), although Ernest Gellner, professor of philosophy at Sussex, has produced some pertinent articles. For the most part, however, this is an unfortunate programme and we have to look to our theoretical resources in other fields.

For instance, some useful ground material is emerging in the science studies unit at Edinburgh and it also is to be found among the titles of the open university social studies series, it has to be admitted, however, that such a contribution to the philosophy of higher education many of these titles are deficient in their presentation with the sciences (both natural and social).

Nevertheless we have the beginnings of the necessary conceptual tools to tackle key questions but we do not have the sustained capacity to coordinate these insights from the various theoretical traditions in which they are found. The present organizational arrangements simply do not encourage the particular kind of theoretical and disciplinary study of higher education. Even those institutions or departments of education mostly confine their interests to the realm of school education. It is not time that centres were established to stimulate theoretical research into higher education, such research should be established *alongside* empirical work for the reasons we have indicated, can inform each other. Whether Professor Niblett's hopes for this kind of theoretical and practical work will be realized will depend upon both whether his successors are widely shared and whether such research is conducted in the inter-disciplinary spirit. The signs are not encouraging.

The author is an administrative assistant in the registry at the Open University, and a part-time lecturer in philosophy at the Polytechnic of North London.

Richness through austerity

Richard Cave reviews Edward Bond's 'The Woman' at the Olivier Theatre.

Priam is dead; the Greek commanders meet to revise their campaign and imagine life inside Troy. Bond's original conception introduced here a scene for Hecuba and her family haggling for power over Priam's corpse. In rehearsal the lines were reallocated to the Greeks so, as performed, the scene is a vicious parody, as Hecuba's grief is exposed to her enemies' derision. With squeaking falsetto, bent arms simulating pendulous dugs, Nestor travesties the queen as a whore whose histrionics are a calculated political move. This image of a woman is a compound of fear, hate and malice. The change in production is a masterstroke wielding narrative with thematic intention.

Bond's Trojan War is a struggle to possess not Helen of Sparta, but a statue of the Goddess of Fortune, a talisman believed to assure fertility and concord. Greeks and Trojans worship a feminine principle as their ideal yet deny the demands of that ideal preferring the easier masculine code of political necessity which is an excuse rather than a justification for warfare. The double-thinking is ingrained. Hecuba and Ismene, wife of the Greek leader Heros, unite to end the senseless massacres. They are defeated by the forces of superstition and blood-lust motivating soldiers and populace alike.

Troy is sacked; Heros celebrates the possession of Fortune with unstinting atrocities: Ismene is immured alive for her "treachery"; the wealth of suffering dehumanizes Hecuba who blinds herself rather than watch her grandson's execution. The woman once worshipped as the Venus of Asia crawls in her own blood to a chorus of Greeks cat-calling "Bitch!"—the insult that desecrates a woman's essential self, her fertility and intelligence. And Nestor revels, drunk with looting, lauding his virility; himself a caricature now: senile degenerate.

Bold, clear visual images throughout advance the narrative and crystallize memorably the deeper intricate resonances that pattern Bond's argument. The nightmare world of brute diplomacy gives place to an open seascape. Years have passed; Hecuba, while being carried to Greece, has been shipwrecked on an island; she guards to shrine and protects Ismene (saved from death by looting soldiers, but left a mindless child). Her mothering of Ismene is the one human confirmation that discards the elemental calm that Hecuba has discovered beyond heartbreak and desperation, as she sits in her rags like a primitive stone carving among the rocks on the shore. Heros reappears; Athens is rebuilt, wealthy, a monument of male design, power and rationality.

Yet Heros needs Hecuba in Athens to settle his private guilt and Athens needs the statue of Fortune to perfect its security. Irrationality and superstition still bedevil the grand design for peace. To experience Hecuba's inner strength as we do is to realize that Heros's victory was Pyrrhic: he still trusts to might. If the statue was lost in the shipwreck, the Greeks will dredge the sea. With prodigious cunning, Hecuba traps Heros, unsuspecting, in the web of his own obsessions and brings about his death. Her private revenge is exacted but she works to safeguard the freedom of the islanders from Greek exploitation and preserve their life of unsophisticated pieties.

Bond's dialogue composed of terse pithy sentences is a fine stimulus to the imagination. He does not strive after the poetic, but, being keenly responsive to the fluctuations of the characters' moods and to the narrative, his bald style is rapidly invested with a dense texture of implication, ironies and witty nuance. The first encounter of Hecuba and Ismene is an exemplary brilliance. With politeness edged with insult each tests the other's will searching for the weaknesses that might underlie confidence only to realize the misery they share in their political impotence, which gives Ismene the courage to offer herself as voluntary hostage to break the war's stalemate stasedon. Emotional intricacies here are conveyed with astonishing clarity.

Such austere but allusive language demands subtle playing. Rehearsals patently involved a rigorous paring down of the actors' vocal and playing techniques to stark essentials of emphasis and movement so that language is compelling for not being *pointed* in a manner that would limit its range of reference. Disciplined restraint is the hallmark of the whole production: each of the numerous scenes has its quality of stillness that is not posed but alive with energy. Actions breaking forth are exact and terrible. Bond's policy of richness through austerity makes



Yvonne Bryceland as Hecuba with Paul Freeman as The Dark Man.

for an inventive handling of the epic reaches of the Olivier stage backed simply, in Hayden Griffin's design, by massive steel shutters and carpeted in red or grey.

The completeness of the conception is what impresses and nowhere more than in the inspired casting. Nicky Henson (Heros), Susan Fleetwood (Ismene), Andrew Cruickshank (Nestor) and, above all, Yvonne Bryceland (Hecuba) have extended their own individual ranges and achieve performances of remarkable distinction because they implicitly trust Bond's conception and method and do not play for the easy histrionic displays that each of their roles might readily invite. Control of the order Bond exacts demands great courage of an actor: all four meet the highest praise.

Greek tragedy has been a [con]spicuous omission from the National's repertoire. The organization effected to meet the commission is searching for a theatre that has given them access to an actress who has trained a cast in the necessary skills. It is typical of his generosity that one of our finest interpreters of dramatists should make innovative production methods that are [ex]citing in possibilities.

The author is a lecturer in drama at Bedford College, University of London.

It has taken 50 years for the proportion of women undergraduates to match what it was in the mid-1920s.

Tessa Blackstone charts the inroads women have made into higher education and asks-

Success or failure?

[Last] month the fiftieth anniversary of universal franchise was celebrated. The nineteenth-century legislation had excluded women and the 1918 Act gave the vote only to women householders, so that it was not until 1928 that every woman had the right to vote. This anniversary provides an opportune moment to examine the access women have had to higher education and to survey the contribution they have made over the past 50 years.

The intelligent layman asked to compare the situation in the 1920s with that of the 1970s and to invest in some guesswork on what has happened in between would probably state that in the earlier period there was a mere handful of women in British universities, and that there had been a steady progression since towards an increased proportion. The facts are different. In 1921-2 there were approximately 19,500 women undergraduates in British universities and 1,700 postgraduates; 50 years later in 1970-1 these numbers had grown to 56,000 and 9,500 respectively. However this growth reflects the expansion of student numbers that has taken place over the past half century, not an increase in the proportion of women.

Table I shows that the proportion of women undergraduates was higher in the mid-twenties than at any other five-yearly interval until 1975-76. There was in fact a decline in the number of women undergraduates in the 15 years from 1925-26 until the Second World War. There was a small increase immediately after the war followed by a further decline in the early 1950s. The proportion then remained constant at about a quarter of the total until the mid-1960s when it began to rise again. It has gone on rising fairly rapidly since then and has now (1977-78) reached 36 per cent. If current trends in the number of girls staying on at school to take A levels continue the proportion can be expected to rise even further and will reach 40 per cent by 1980 or soon after.

There has been a greater rise in the proportion of women postgraduate students over the past 50 years, from 15 to 26 per cent. However, the substantial increase after 1970 is probably the result of a change in the postgraduate concept in education rather than of any sudden spurt in the number of women doing higher degrees. The main increase in the late 1960s and 1970s is in line with the increase in the number of women undergraduates in the same period. More research is needed before these trends can be explained with any confidence. However it is possible to speculate a little about the fact that in the mid 1920s the 40,000 women students of the time were predominantly middle class. Apart from the scholarships there was insufficient financial support for students coming from working class backgrounds. Moreover, the majority of working class children receiving a secondary education and completing it was small. Although there is no statistical information to demonstrate this it seems likely that the women students were even more predominantly middle class than the men. Moreover at that time they were probably drawn from a narrow stratum within the middle class: that is from progressive, intellectual or semi-intellectual backgrounds where conventional views about appropriate activities for young women were more likely to be challenged. Thus in most bourgeois homes a university education for girls would be seen as a needless pursuit and an unnecessary expense.

In the early post-war years the size of this middle class group relative to others in the university probably declined. In the years 1945-1947 large numbers leaving the services entered the universities, including a substantial number of women who, like some of their male working class peers, had probably been "liberated" by their wartime experiences in the services—hence the increased proportion of women at that time. However, once this special generation had passed through the universities the expansion which brought in increased numbers of working class students may have worked against any growth in the number of girls. While some able and ambitious working class boys received encouragement from home and school to go to university this was rarely true in the case of girls.

Another factor which served to limit the number of girls going to university was the growth of the teacher training colleges in the 1950s and 1960s. For many girls they were an alternative form of higher education to the universities, rather than a vocational training. The closure of the colleges in the 1970s as well as the increase in girls staying at school to take two or more A levels has helped to reverse this. How much of the rapid growth in girls going to university in the past 10 years can be attributed to an institutional factor of this kind and how much to changing values and attitudes associated with pessimism is hard to tell.

Unfortunately there is no historical data available for the proportion of women university teachers. However, Table II shows the present position. It shows that out of just under 40,000 university staff only 4,500 are women, that is 11.5 per cent. It also shows as others have done before that the under-representation of women in senior posts is continuing. Whereas 29 per cent of junior research staff are women, only 6 per cent of readers and senior lecturers and only 2 per cent of professors are women.

It is an astounding fact that there are only 84 women professors in the United Kingdom. The AUT has established a working party on the position of women in the universities which is calling for further research on such questions as recruitment, promotion and salary levels, the causes of under-achievement and the extent of discriminatory practices.

Some research along these lines has already been done (Blackstone and Fulton, *British Journal of Sociology*, September, 1975). There is, however, room for more. It would also be interesting to compare the inroads women have made into other professions such as the higher Civil Service, the law, medicine, architecture and the media. When such comparisons are made the number of women professors may seem less disappointing.

For example, in the Senior Civil Service there are at present no women permanent secretaries and only a handful of deputy secretaries, such as Ann Meuller at the Department of Industry, Sheila Brown, the senior chief inspector at the Department of Education, and Elizabeth Shore, deputy chief medical officer at the DHSS. There is only one woman ambassador, Ann Warburton in Copenhagen. No national newspaper has a woman editor or deputy editor nor have any of the political weeklies. There are only a few women judges and none so far in the Court of Appeal or the House of Lords.

So, comparatively, women in universities may not have done so badly, and in spite of the somewhat gloomy statistics on academics there are many individual women who have made major contributions to teaching and research in a variety of fields over the past 50 years.

From the quite small group of women who went to university during the 1920s there have been a considerable number of brilliant successes. They are spread across the whole range of academic endeavour from natural scientists like Dorothy Hodgkin to economists like Joan Robinson or archaeologists like Kathleen Kenyon. Many of them were educated at the women's colleges at Oxford and Cambridge and many of them have spent much of their careers doing research and teaching there. However they are not to be found there exclusively. Women such as Barbara Wootton, the social scientist and Kathleen Lonsdale, who has done pioneering work in X-ray crystallography spent their careers in the University of London. And in spite of the preponderance of arts and humanities graduates there are a number of very distinguished scientists in this group who have established international reputations in their academic field.

The Royal Society has at present 27 women members, out of a total of 861. They are listed in Table III. The absence of physicists in the list is striking, as is the high proportion of biologists (broadly defined to include botanists, physiologists and zoologists) and biochemists. This is perhaps a reflection of subject choices made by young women on entering university: not only are there differences in the number of girls opting for pure science as against arts subjects, there are also differences within the pure sciences. For some reason girls eschew the study of the physical sciences, whereas the biological sciences including biochemistry attract them more.

The institutions in which the eminent ladies listed below work are not shown, but although a few of them are (or were before retirement) in various research institutions such as Harwell, the National Institute for Medical Research or one of the Marine Biology Stations, most of them have spent large parts of their lives in universities where they have taught future generations of scientists as well as done research. In areas where there are so few women their teaching function is particularly important in providing for undergraduates, role models of successful academic women scientists.

Few of these women, however, are able to provide a model of the successful combination of marriage, family and a brilliant career. They are with one or two exceptions such as Dorothy Hodgkin and Margaret Burbridge, the astronomer, childless. Most of them have remained unmarried too with a few exceptions such as Dorothy Needham married to the Cambridge scholar Joseph Needham, who is widely known for his work on China and Ruth Sanger the geneticist, who has collaborated extensively with her husband, Robert Race.

There is another striking characteristic about these women fellows of the Royal Society, their immobility. Most of them have spent 20 years or more in one institution and a few of them have spent their whole life working in one university department or research institute. Some of my past work on women academics in general revealed this tendency. We also discovered that high mobility was correlated with academic success (at least measured in terms of promotion to the most senior jobs). This led us to suspect that lack of mobility might be a factor in the relatively poor promotion prospects of women academics.

In the case of this elite group this is obviously not applicable; they have reached the top without moving about. Indeed building for themselves in one place a research environment conducive to steady concentration on solving the particular problems they have identified, thus allowing for continuity and avoiding upheavals, may have helped them achieve such eminence.

The most dramatic growth in the universities in recent years has been in the social sciences. Women social scientists have done relatively well compared with men. My earlier research revealed that in this faculty in contrast to the others women achieved publication rates as high as their male colleagues and were more likely to be promoted to senior positions than women in other fields.

There are in fact a growing number of women professors in the social sciences. At the London School of Economics, still the main centre of social science research in Britain, Hilde Himmelweit, well known for her work on television and the child is professor of social psychology. Ragnild Hatton is a much respected professor of international history, Dalia Nevitt, an expert on housing policy, is a professor of social administration, and Joan la Fontaine is a professor of social anthropology. Round the country there are a number of other women social scientists with chairs, many of whom were either educated or taught at LSE. They include Margaret Stacey, professor of sociology at Warwick, Phyllyda Parsloe, professor of social work at Bristol and Michelina Clifford Vaughan, professor of sociology at Lancaster.

There are, however, surprisingly few senior women economists—Joan Robinson remains a rare exception, though in economic history there have been women of notable achievement such as the medievalist Eileen Power and Eleanora Wilson, both part professors at LSE. Contemporary economics is a subject where women have still to make an important contribution. However, women social scientists have occasionally turned their hand to the study of subjects which many would define as likely to be of more interest to men. Notable in this respect is Margaret Gowing at Oxford, who is almost certainly Britain's most eminent historian of science policy.

There is another important area of academic life to be considered: university administration. There are no figures available on the number of women administrators though it seems likely that at the lower levels at least they are fairly numerous. However, there are no female vice-chancellors at present, nor has any university, which has a permanent vice-chancellor with extensive administrative and leadership responsibilities, appointed a woman to this position.

Rosemary Murray, the principal of New Hall, was the vice-chancellor at Cambridge, but this is a part-time post which circulates between college principals; Dame Lilian Tenson, principal of Bedford, had the same position on the same basis in the University of London some years ago. Up till now only in the women's colleges at Oxbridge and London have there been women principals.

As the women's colleges have begun to change to mixed colleges, these posts may increasingly be filled by men. Bedford College, London, has been headed by a man for some years. Lady Margaret Hall, Oxford, has recently appointed a male principal. St Hilda's is now searching for a new principal but is limited by statute to appointing a woman. Many feminists welcome this and are worried about the prospect of women being edged out of jobs that they have performed with success for many years.

To return to the statistics with which this article began, the growing number of girls going to university in the 1970s is cause for optimism about the inroads women may make in the future. Whereas we cannot expect to find women represented in equal numbers to men at all levels in British universities in any of our life-times it would be unfair to accuse anyone of false optimism who claimed that the future will bring more women Nobel Prize winners, more women members of the British Academy, more women Fellows of the Royal Society, more women professors, more women research students, and simply more women graduates.

The author has recently been appointed professor of educational administration at the Institute of Education, University of London.



Women who have reached the academic heights: from top: Margaret Burbridge, Baroness Wootton, Rosemary Murray, Phyllida Parsloe.

TABLE I

Percentage of women among full-time university students

	'25/6	'30/1	'35/6	'38/9	'45/7	'50/1	'55/6	'60/1	'65/6	'70/1	'75/6
Undergrads.	31	27	24	23	26	23	25	25	27	30	35
Postgrads.	15	16	12	12	15	20	21	19	20	22	26

Source: DES Statistics

TABLE II

University Staff (1925/6 to 1975/6)

Grade	Men	Women	Total	% of Women
Professors, Senior Lecturers	4,121	84	4,205	2.0
Readers, Assistant Lecturers	7,647	499	8,146	6.1
Senior Research Staff, etc., majority paid beneath Lecturer	21,293	3,260	24,543	13.3
Lecturer	1,585	642	2,227	28.8
TOTALS	34,641	4,485	39,126	11.5
Number of men above Lecturer grade out of total men employed				14%
Number of women above Lecturer grade out of total women employed				13%
Comparatively high percentage of women employed in "other" categories is very notable.				

Source: UGC statistics, AUT Bulletin, Summer, 1978.

TABLE III

Women Fellows of the Royal Society by date when became FRS and subject

Cartwright, M.	1947	Mathematics
Hodgkin, D.	1947	Chemical Crystallography
Munton, S.	1948	Zoology
Needham, D.	1948	Biochemistry
Fell, H.	1952	Zoology
Vogt, M.	1952	Pharmacology
Pirie-Rivers, R.	1954	Biochemistry
Porter, H.	1955	Plant Physiology
Auerbach, C.	1957	Animal Genetics
Bulbring, E.	1958	Pharmacology
Bishop, A.	1959	Protozoology
Tait, S.	1959	Biochemistry
Manton, I.	1961	Botany
Burbridge, E.	1964	Astronomy
Hill, D.	1965	Geology
Pickford, L.	1966	Physiology
Watkins, W.	1969	Biochemistry
Rees, F.	1971	Parasitology
Parke, M.	1972	Botany
Sanger, R.	1972	Immunogenetics
Askonas, B.	1973	Immunology
Lyon, M.	1973	Genetics
Clarke, P.	1976	Biochemistry
Widdowson, E.	1978	Human Physiology
Muir, I.	1977	Biochemistry
Foreign Member		
Lehmann, I.	1969	Geophysics

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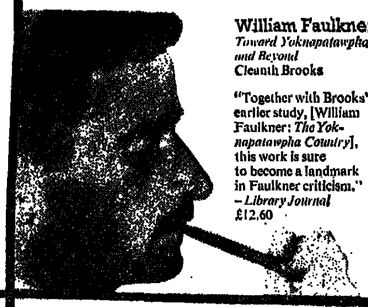
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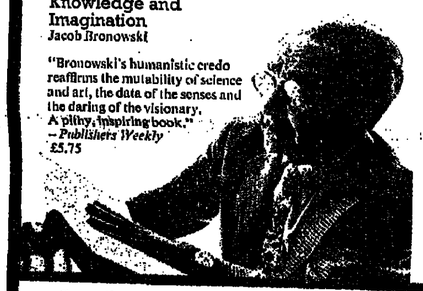
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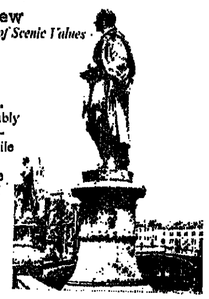
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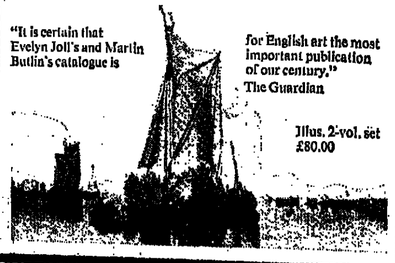
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The Social and Political Thought of *Leon Trotsky*
by Baruch Knei-Paz
Oxford University Press, £15.00
ISBN 0 19 82733 2

History certainly belongs to the victors. Of Stalin there are studies galore—though the abrupt cessation of publication of his works on his death serves as a reminder of the temporary character of political triumph. Lenin's *Collected Works* have been available in many languages for several decades—though balanced assessments of his life have only recently been provided in the works of Liebman and Harding. Of Trotsky, however, who was the architect, with Lenin, of the Bolshevik victory but who lost out to Stalin in the power struggle of the 1920s, there is no complete edition; and a full treatment of his thought has had to wait until 40 years after his exile from the Soviet Union and almost 30 since his murder in Mexico by Stalin's agents.

Yet Trotsky remains perhaps the principal inspirer of the extreme left in the Western world where his followers can combine scorn for the very degeneration of the Soviet Union with almost fanatical devotion to the cause of proletarian revolution. He is thus a fitting subject for consideration as a Modern Master and Irving Howe's short study is a welcome addition to the series. Howe describes himself as an ex-admirer of Trotsky who now adheres to a socialism far removed from that of his former mentor.

Howe writes in a clear and lively style. His book is good on the authoritarian aspects of Trotsky's politics and particularly strong—as befits a professor of English—on Trotsky's interest in literature. There is as much on Trotsky's life as on his thought and rather too much narrative—certainly too much on the 1917 revolution. This disproportion means that there is no discussion of the role of Parvus in the formation of the theory of permanent revolution, that the differences between Trotsky and Lenin are not spelt out, and that there is virtually nothing on Trotsky's policies in the 1920s—in particular on the crucial question of socialism in one country. Nevertheless, it can be thoroughly recommended as an introduction.

With Professor Knei-Paz's *The Social and Political Thought of Leon Trotsky* we have a book that is long overdue. His exhaustive acquaintance with the original sources, his careful scholarship and considerable ability to synthesize have enabled Knei-Paz to produce an excellent intellectual biography. The lengthy study is centred on the theory of permanent revolution and divided into four parts: the first deals with the formulation of the theory around 1905, the second with the practice of the theory in 1917 and the third with the "betrayal" of the theory in the 1920s. The fourth and final section deals with Trotsky as a writer on philosophy and literature.

Although Knei-Paz is concerned to present Trotsky as a coherent and powerful theorist—indeed the most coherent and consistent of all the Bolsheviks—he does not neglect the extent to which political realities impinged on ideas. One of his underlying themes is "to bring out not only the scope and impact of ideas but their limits as well: the extent, in other words, to which intellectual preconceptions 'in the mind of revolutionists' may be said to have played a role in shaping history, and the extent to which such preconceptions were overpowered and made largely immaterial by the forces of reality." This relationship between ideas and events is particularly well brought out by Knei-Paz when discussing the question of Trotsky's joining the Bolsheviks in 1917; in his treatment of Trotsky's social and economic views after 1917; and in his analysis of Stalinism.

Nevertheless, Knei-Paz's focus remains that of theory and it is worth dwelling on two issues that



Trotsky at different stages in his career, from Robert Payne's The Life and Death of Trotsky (W. H. Allen, £8.95).

[illegible] standing work on Trotsky has been Deutscher's three-volume biography which, owing to its scope and sheer power of writing, has rightly been regarded as a masterpiece. Knei-Paz differs from Deutscher on two main issues—one specific, the other general.

The specific issue concerns Trotsky's anti-Lenin and anti-Bolshevik background during the period 1903-1917. Trotsky's grim prophecy that under Leninist centralism, "the organization of the Party takes the place of the Party itself; the Central Committee takes the place of the organization; and finally the dictator takes the place of the Central Committee" has, naturally, been widely quoted. But the nature and extent of Trotsky's anti-Leninist views have never before been as fully explored as they are in the first section of Knei-Paz's work. Of course, after 1917 Trotsky himself wished to minimize his opposition to the Bolsheviks—it was his non-Bolshevik past and consequent lack of power base in the party organization that was one of the major factors in his downfall in the 1920s. Deutscher hardly mentions this aspect and thus distorts both history and Trotsky's views.

The more general issue is that of the historical significance of Trotsky's thought: was he, as Deutscher believes, primarily a Marxist of the "Western" or "classical" variety? Or was his most important contribution in the relationship of Marxism to backward societies? Knei-Paz is concerned to argue the latter throughout his book and particularly in the first part where he examines Trotsky's sociology of Russian history and development.

In his socioeconomic analysis, Trotsky started from the phenomenon of Russia's backwardness: "we can say that the main characteristic of Russian social development is its comparative primitiveness and slowness". The Russian state had to swallow more of the surplus product to defend itself as it was less developed than those exerting pressure on it—Poland, Sweden, and Lithuania. Thus: "from a certain moment—especially from the end of the seventeenth century—the state strove with all its power to accelerate the country's natural economic development. New branches of handicraft, machinery, factories, big industry, capital, were, so to say, artificially grafted on the natural economic stem. Capitalism seemed to be an offspring of the state".

This meant that there was no internally self-sufficient capitalist [illegible] but the state investing, what it could borrow abroad from the European bourgeoisie—an artificial and precarious arrangement. Its artificiality (as opposed to slow organic growth) meant that it could be all the more rapid. And, indeed, the pace of industrialization about 1900 was enormous. The relatively few capitalists who ran this expansion were dependent on the foreign capital, which was channelled through the state, and thus lacked an independent and wide social basis. Simultaneously, the working class was created very rapidly and came straight from the land—unlike the West. Thus Russia could skip over stages in economic development, but this created at the same time a curious social structure: a centralized, autocratic government with aristocratic privileges and a large peasantry, combined with advanced industrialization and a cohesive, if small, working class. It is combination of the old and the new with no mediating factor such as a strong middle class made for social and political instability.

Trotsky's conclusion was: "the administrative, military and financial power of absolutism, thanks to which it could exist in spite of social development, not only did not exclude the possibility of revolution, as was the opinion of the liberals, but, on the contrary, made revolution the only way out; furthermore this revolution was guaranteed in advance an all the more radical character in proportion as the great might of absolutism dug an abyss between itself and the nation".

What was later to become known as the theory of "permanent revolution" flowed from this analysis. For, according to Trotsky, the working class had a significance in Russia that was out of proportion to its size, in that a worker in a large-scale industry was more important than a worker in smaller enterprises—and Russian industry was nothing if not large-scale. And this industry was more exposed than in the West as it was not encompassed by a long-standing and all-pervasive capitalist sociocultural ethos. The working class was in a position to paralyse industry and control urban centres as in few other countries. Trotsky asserted, therefore, that "it is possible for the workers to come to power in an economically backward country sooner than in an advanced country". He also asserted that Russia combined the three factors of an economically low level of capitalist development, a politically insignificant capitalist bourgeoisie, and a powerful revolutionary proletariat. And he quoted Russia has fallen to the lot of the only now-existing strong class in the country—the industrial proletariat".

Of course, a certain level of working-class consciousness was necessary for the seizure of power but Trotsky claimed that a determined minority was sufficient (Here we see in embryo the domination of the political over the social and economic that was to be so characteristic of post-revolutionary Russia). The support of the peasantry would be necessary and they would see that their problems could only be solved by revolutionary means—but the proletariat must nevertheless remain dominant. But as divisions among the peasantry emerged following the redistribution of land the proletariat would be forced to adopt socialist attitudes. (Here Trotsky went far beyond Parvus.) The proletarian government would find that increasingly radical measures would be forced upon them. "Immediately that power is transferred into the hands of a revolutionary government with a socialist majority, the division of our programme into maximum and minimum loses all significance both in principle and in immediate practice. A proletarian government under no circumstances can confine itself within such limits". Therefore "there can be no talk of any sort of special form of proletarian dictatorship in the bourgeois revolution, of *democratic* proletarian dictatorship (or dictatorship of the proletariat and the peasantry).

"The working class cannot preserve the democratic character of its dictatorship without refraining from overstepping the limits of its democratic programme. Any illusions on this point will be fatal. They would compromise social democracy from the very start". This was the idea of uninterrupted revolution, "... an idea which connected the liquidation of absolutism and feudalism with a socialist revolution". But these very socialist measures would assure such violent internal opposition (particularly given the disparate and backward social structure) that the very existence of the proletarian government would become doubtful without external support; without the direct state support of the European proletariat the working class of Russia cannot remain in power and convert its temporary domination into a lasting socialist dictatorship". And it was, of course, precisely this support from the European proletariat that was not forthcoming for the Russian Bolsheviks once they had come to power in 1917.

Although it was not Trotsky's intention, this view could be, and was, used to provide a theoretical justification for the subsequent course of the revolution. In Knei-Paz's words: to argue that a socialist government, socialist institutions, were on the order of the day was to argue that a political revolution had to precede the social one, that institutions had to be created which not only did not have roots in social life but took precedence over it. Trotsky had in fact committed himself to the view that socialism was to be imposed from above, that state institutions would—carry out that revolution which society itself was either incapable of, or unprepared to give birth to, that, in a word, revolution would make society conform to politics and to political ideology—a curious and far-reaching reversal of the Marxist view of historical change.

But perhaps the most curious paradox in Trotsky's work is his combining the theory of the revolution of backwardness with the belief in the possibility of world revolution—which also goes a long way to explaining his popularity among many Western radicals. For the revolution of backwardness was one specific to underdeveloped countries such as Russia and could have no counterpart in the West. And yet Trotsky remained sufficiently "Western" to pin his hopes upon a universal revolution which would inaugurate an international socialist society. His commitment to these two beliefs remained constant during his 40 years as a political activist.

[illegible] struggle for the interests of all

China

China from the Opium Wars to the 1911 Revolution
by Jean Chesneaux, Marianne Bastid and Marie-Claire Bergère
Harvester Press, £13.50 and £5.00
ISBN 0 85527 759 9 and 661 4

China from the 1911 Revolution to Liberation
by Jean Chesneaux, Francoise Le Barbier and Marie-Claire Bergère
Harvester Press, £13.50 and £5.00
ISBN 0 85527 760 2 and 651 7

These are the first two of three volumes written by a group of French scholars, offering a history of China from 1840 to 1976.

The earlier period, from the Opium Wars to 1911, has already been extensively studied and several surveys of it are available—the most recent being the first of the new *Cambridge History of China* (*Volume 10, Late Ch'ing 1800-1911*). In spite of this competition, this book, by virtue of its smaller scale and of the special interests and skills of the authors, establishes itself as an interesting and useful work. It captures the sweep of the disintegration of the traditional order and at the same time does so in a way that provides detailed and original insights into this process. Particularly helpful are some specially constructed maps.

Of the three volumes, it is the second that has least competition and the greatest potential to fulfil an unsatisfied need. Compared to nineteenth-century and Communist studies, the interregnum between 1911 and 1949 has been neglected, although in the past decade a number of younger scholars have produced some striking specialized studies. The period is of great importance since without an intellectually satisfying synthesis of it, the rise of the Communist Party and the evolution of its policies as it has struggled to propel China forward, are incomprehensible. And it must be remembered that this was the formative period for the majority of the leaders who still rule China.

There is no doubt that readers will find some ideas and material in the present book of interest. Few, however, will be satisfied with it. The main problem is its structure. The period is divided into 12 chapters within each of which several themes are woven. This is similar to the structure of the first volume, but whereas in that the broad story remains firm in outline, in this, the continuity tends to disintegrate. Thus no coherent impression of either the chronological development, or the individual themes, is maintained throughout. Moreover, as in the earlier volume, readers will find that the romanization of Chinese names makes even names with which they were familiar unrecognizable (Chiang Kai-shek, for example, appears as Tsiang Kai-chek.) And in this, more than in the earlier book, the specialist will find the lack of footnotes or even of guidance to the sources used very frustrating.

Finally, although the authors have found much that is original to say, the general interpretation of the second volume in which almost everything that Mao and the Party did is seen as morally and politically correct, and all that their opponents did as misguided and reprehensible, is unlikely to seem credible to most. If this interpretation had been correct, the development of China since 1949 would not have been the complex, violent, and tortuous stream of events it has proved to be.

Christopher Howe

FREUD

Just published
The Scientific Evaluation of Freud's Theories and Therapy
S. Fisher & R. P. Greenberg.
£12.50
Major book of readings

HARVESTER PRESS

BOOKS

Around not about

Shandyism : the character of romantic irony
by Peter Conrad
Blackwell, £9.50
ISBN 0 631 18720 0

I expect nobody will like this book, and not only because almost every reader will feel outsmarted at some point in it. Whatever your specialism Peter Conrad is almost certain to be there ahead of you. Sir William Hamilton or Hanslick, Satan or the art of the silhouette, "The Ancient Mariner" or Mahler: it is not only that he writes better and about more, but that he has a place and a purpose for all these things.

Yet enviable as his facility and resource are, they are not in themselves what will get his work disliked. At least what makes me dislike it is something in the whole economy of the book, something which almost wilfully prevents any of the ideas from "taking". There is a book who runs may read, but the reader of *this* book may well find himself running on the spot: each step feels like the first step, each beginning seems to be an end in itself.

Of course Mr Conrad is much too smart not to have anticipated this reaction, perhaps even calculated it. He could claim that the book's refusal of linear progressive development is precisely the book's subject, and in effect the very first words in the book do make this claim: "This is a book less about than around *Tristram Shandy*." Around and about is a Shandyean motion, and what Peter Conrad is trying to characterize (or rather, like a portraitist, to annexe by characterizing) is Shandyism.

The word itself, of course, is a way of characterizing something. In fact the one definitive act involved in establishing "the character of romantic irony", may be said to have taken place before the book begins, in identifying that word, Shandyism. The title, that is to say, is less a description of the book, than an incentive for it.

For this reason the preface is misleading in proposing a sequential train of thought through the book. It is true, it goes through a kind of sequence from "the romantic recomposition of Shakespeare", by way of the "mental space" of the novel or the lyric, the "intellectual" libertine or the libertine aesthetic of romantic visual art, to the "visionary perception" of German romantic criticism.

But actually Mr Conrad is not occupied with what at one point he calls "the illusory continuity of narrative". He praises the critical perceptiveness of the "man in the joke" who, having slept through *Tristan* and awakened to hear in the final bars the themes of the opening, was pleased to have missed nothing: "Nothing, and everything, had happened. The work does not develop, but recurs." This is a parable for the reader of Mr Conrad's book.

With this in mind we will perhaps not feel that there is some fudging in his reading of Shakespeare or Wordsworth, or his connecting, say, of Don Giovanni with Hamlet or Falstaff. There are many passages, certainly, where it is difficult to see what his own view really is. He can see the point in everything; there seems to be no position he cannot colonize and exploit. But even, in the long run, what he thinks about romantic irony is not quite clear. He has traced it through all its forms with unfailing insight and subtlety, but what, after all, does it mean to him? Well, these are the questions that nag if one does *not* approach his book in the way it asks to be approached. And it is true that as one attends to its distinctive pattern of recurrence and redefinition, it becomes clearer that his theme is one that must prevent him taking up a fixed and definite position.

That theme fundamentally is transformation. "Translation", he argues, "promotes misunderstanding and blurs exact meanings, but in the romantic view this can be revelatory" (page 156). This exactly fits his own case: he intends the blurs. He has to do with the way things change their contours and their complexions. "Romanticism moves towards a transformation of each art into its opposite." In response to this the book is constantly shifting its perspectives, altering its terms of reference, taking new points of view. Its mobility and yet lack of movement are quite explicable as the means to an examination of an art dependent on metamorphosis.

Yet, though one can understand why the book had to be written in this way, and why the author had to risk, perhaps, as he puts it, even to "promote misunderstanding", the fact remains that it is not easy to accept or like it. There remains something in it that spoils its brilliance.

Its mobility eventually registers as restlessness; its transformations begin to seem too easy and fluid to be significant. When everything can be changed into something else, everything begins to look alike. A key word in the book is "like": Prospero is "like" Flaubert, *Tristram Shandy* "recalls" Prospero (though Prospero, it is true, is *unlike* Hamlet); Don Giovanni, "like" Hamlet or Tristram or Byron's Don Juan, "fails as an agent in order to succeed as an artist", and so on. It is not, in all such cases, that one cannot be persuaded that there is a likeness, but that one cannot help feeling that the residual *unlikeness* is actually the more interesting, distinctive, significant thing. After all the blurs blur, and the restlessness withholds its revelations.

John Preston

The broad famous English poet

Chaucer : the critical heritage
Volume 1, 1358-1837
Volume 2, 1837-1933
edited by Derek Brewer
Routledge & Kegan Paul, £17.50 (the set)
ISBN 0 7100 8497 8

Chaucer is the earliest and certainly not the least of writers in English to enter into his "critical heritage". His antiquity and his eminence justly earn for him—perhaps even for the winding procession of his critics—these two full volumes, welcome additions to a useful, well-established series.

Here is plenty: not the divine plenty which Dryden found in Chaucer's own works, but an extensive and rational selection of secondary materials. Many of the testimonies in the smaller first volume are brief *obiter dicta*, summary judgments or familiar allusions. Thoughtful scholarly assessment starts with Thomas Warton in his *History* (1774) and has gone on ever since.

Early nineteenth-century critics never evinced an enthusiasm for Chaucer comparable with that which they discovered for the Elizabethans: he could never offer much support for a medievalism of wonder. But throughout the century Chaucer was being slowly and solidly accommodated within the establishment of scholarship and learned criticism, as is made clear in volume two. The canon was defined, the life investigated, the historical background explored. Dr Brewer's last witnesses are called from the 1930s when Empson, C. S. Lewis, Chesterton, T. S. Eliot, and A. E. Housman variously re-engaged new interests in Chaucer among the intelligentsia. After them the deluge, the post-war deluge of academic professionalism. Sensibly the editor halts at the edge.

The older material should not be slighted by any up-to-date Chauceriam. Many interesting and unexpected judgments have been collected here as well as many important historical scraps. Dr Brewer has not sought to disinter novelties for their own sake nor to construct an easy consensus. In his elegant and instructive Introductions he is more concerned to trace the systematic changes in readers' responses over six centuries. The responses show not only what readers at different times made of Chaucer but also illustrate their assumptions about the nature of literature itself. To register these other readers' responses successively is to plot a course for English literature from the fourteenth century onwards. In introducing his selections Dr Brewer also produces a long view of English letters.

Dr Brewer revives Bishop Hurd's favourite "Gothic" to describe Chaucer's writings and the standards by which Chaucer wrote and the standards by which he was first judged. Dr Brewer views Gothic literature as essentially the product of late medieval stylistics which exploited language itself as the material of art. Literature was considered as broad-based as language and was not expected to transcend it. Chaucer was a writer of such range and scope that later literary theory which saw art as rising beyond language could not wholly accept him and approve. The humanist ideals that transformed Gothicism into Neo-Classicism insisted on wisdom as well as eloquence and wisdom was to include placing concepts in categories and hierarchies. There were some extra-literary things a dedicated writer should aspire to, some linguistic matters he should not touch at all. Chaucer could appear as too slack, too indiscriminating, artistically and intellectually too unambitious.

Later a sentimental age would turn such simplicities into virtues and Chaucer could be praised for his naivety and dewiness, for still when literature came to be primarily novels, then the realism of character-delineation, the plain language and common sympathy could be emphasized. By the twentieth century Chaucer had acquired a foundation role in the history of English moralism as an opposite to humorist, the epitome of our essential decency and good sense, a safe Tory who could be assimilated into the Great Tradition.

Such judgments have less relevance if not currency. Obviously Chaucer as a writer governs affection in his readers and so ultimately keeps his distance. Who of a modern Chaucer? Neither Dr Brewer nor his publisher promises a third volume, which could be a very large book indeed. Without doubt it would show that our changing demands on literature are still flatteringly we call "pluralist"), which we often mean that they are inconsistent, over-specialist and wardly cancelling. Whether a fifth volume of modern criticism will give us as affectionate a sense as prehensive a view of Chaucer these two volumes provide effectively is much less certain.

Geoffrey Shepherd

James in a personal context

The Novels of Henry James : a study of culture and consciousness
by Brian Lee
Edward Arnold, £5.50
ISBN 0 7131 6115 9

Who could write an opening sentence of this quality and survive? "At this time the single most important task for the critic of Henry James is probably that of rescuing the novelist's work from the distorting, Procrustean bed of philosophical theory in which it so uncomfortably rests." Fortunately Mr Lee does survive.

The comprehensive subtitle of this extended essay (117 pages) is not fanciful. The great virtue of the work is that one wishes it longer. Points which are merely asserted should be argued, and I feel that they are worth the argument. Not that there is much spurious "originality" here. We encounter many of the familiar quotations: and are only especially struck by the admirable extension of Mr Lee's thesis into the relatively unexplored areas of James's later work—*The American Scene* and *The Ivory Tower*.

The purpose—indicated above—of the survey is to counteract the cultural "decline to cease and elicit from the artist's work a coherent and rounded philosophy—the extracted essence of a lifetime's experience or the painstaking translation into art of another's philosophical system" this seems to me to be out of date. Does anybody seriously do this now? It looks like a string upon which Mr Lee chooses to hang his beads of perception, rather than a living issue. Perhaps he wants his knowledge of nineteenth-century American intellectual and social movements to be illustrated. But what really counts is specific analysis and judgment. And here there are three points to be made: first, that some observations are very well made indeed, for example that James is not necessarily endorsing the moral austerity of Fleda Vetch in *The Spoils of Poynton* (there are further instances); second, that the essay seems to be thrown together from various levels of discourse as when we are told the names of novels and then referred, though it were familiar, to "Sidgwick Circle"; and third, the presentation of the text is semi-flabby with references all muddled up, with, for instance *What Maisie Knew* flagrantly talked of as less than *The Sacred Fount*.

The upshot is that we have here a highly intelligent work, linked with a love and knowledge of its subject but poorly put together. On the whole I congratulate Mr Lee.

Finally, who could not admire a writer who does not use the jargon of the fashionable French school (or any other), and refers to L. H. Myers as "one of the most underrated of modern English novelists"?

At its price I do not know who will be able to encounter this book. I hope someone will.

Roger Gard

Literature as social criticism

Coleridge to Catch-22: Images of society
by John Colmer
Macmillan, £8.95
ISBN 0 333 25301 8

The dustjacket of this strangely uneven book shows a medallion of Coleridge, a bomber aircraft and the ruins of a burnt-out city, the aircraft, a Flying Fortress, is presumably piloted by Joseph Heller's Yossarian on one of his 80 missions.

John Colmer's title is, alas, to be taken literally. His chronological survey starts soundly enough by distinguishing three seminal approaches to social criticism in the early nineteenth century: the "idealist vision" of Coleridge, the utilitarian liberalism of Mill and the "comic spirit" of Peacock. As we move through the book, however, the lack of any clear conceptual structure or consistent methodology becomes increasingly evident. Even to look for such a structure would seem to imply a repudiation in Colmer's view, to the "simplifying principles" with which Marxist and structuralist critics attack the "bewildering complexity" of literary texts. What he offers is not a unified study of the writer as critic of society but a bundle of disparate images.

The body of cultural analysis, realistic fiction and imaginative prophecy which Colmer surveys already has a distinct identity for most of his likely readers. Raymond Williams has done more than any other critic to reveal the continuity and power of writers' responses to the rise of industrialism, and without the influence of *Culture and Society* and *The Country and the City* a book like this would be inconceivable.

There are times when *Coleridge to Catch-22* seems intended as a liberal rejoinder to Williams and other critics who have applied their "simplifying principles" to this major tradition of English literature. At other times it seems more like a popularization, freely borrowing from and breathlessly summarizing the sociological criticism of the last 30 years. A book which offers brief résumés and judicious corrections not only of Williams but of Holloway on the Victorian sage, Trilling on *The Princess Casamassima*, Leavis on *Hard Times*, Lodge on the "Condition of England" novel, Amis on science fiction and many others obviously has its uses.

It is when Colmer is intent on being his own man—as when he instates Coleridge as the *fons et origo* of modern social theory, and lavishes praise on Ford Madox Ford as the most consummate of the Edwardian social realists—that the troubles really begin. Whatever Ford's merits as a literary artist, they do not extend as far as is suggested by this remarkable comment:

> Had the Marxist critic, Georg Lukács, looked at the fiction of Ford Madox Ford, he might have found it necessary to modify his thesis in *History and Class Consciousness* that the limits of middle-class consciousness are marked by its incapacity or unwillingness to come to terms with the category of *totality*.

It is touching to think of Lukács as a docile member of the author's seminar group. Yet this and a number of other comments on socialist thought that he makes cannot simply be put down to professorial eccentricity.

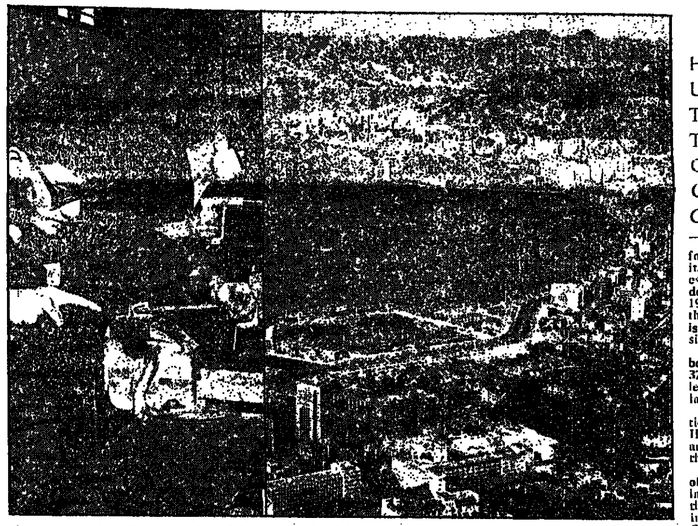
In his conclusion, after inveighing against Marxism, structuralism and the "prophets of the counter-culture", Colmer roundly declares: "This book has an informing principle. It is derived from the facts of literary experience rather than from any ideological standpoint." If we have learned anything from the 1960s, it is that statements like this are just as ideological as the positions they attack. In fact, I would suggest, the loosely empirical surface of *Coleridge to Catch-22* is all too clearly (to use a formula which the author quotes with evident mistrust) a kind of mystification of its structure. Obviously, a book on the social criticism of the last 200 years cannot wholly ignore Marxism and other strands of revolutionary thinking, but Colmer's strategy is to make them seem as insignificant as possible.

What, after all, is the point of social criticism if it has no ambition to change the world, as well as to report on it and make fun of it? Colmer is careful to insert some dutiful references to Marx and other socialist thinkers, but he consistently evades any real confrontation with them. As an antidote to the complacency with which he views "the writer as social critic", I would cite Bernard Shaw's introduction to *Hard Times*, a denunciation of industrialism in which he compares Dickens's "Karl Marx, Carpenter, Ruskin, Morris, Carpenter, itself" against a civilization itself ing that it is not "out of order but our order is horrible". Surely that is the authentic note of social criticism, but of those writers named, only Carlyle and Carpenter are treated in any way adequately in this book.

Patrick Parrinder

Hongkong

A special report on the territory's tertiary sector



Apprentices at work in a technical institute and (right) Hongkong's harbour

Contents

Hongkong University	II
Unscrambling Chinese	III
The polytechnic	IV
Teacher training	V
Chinese University	VI
Campus libraries	VII
Grants Committee	VIII

Where learning sits at the feet of free enterprise

Hongkong's higher education system is uniquely geared to the needs of industry, commerce and government—and thrives on the relationship. Paul Moorman reports

You get short shrift around Hongkong if you ask too often about "learning for learning's sake". From a Chinese parent's point of view education is a good thing if it leads to a good job; and it is a good thing in the all-pervading eyes of big business if it delivers skilled manpower in the required numbers. Otherwise, basically, it is a waste of money.

Money, of course, is a commodity probably wasted less lightly in Hongkong than anywhere in the world. It is a society built almost exclusively on the worship of Mammon. Its free-wheeling, fundamentalist laisser faire brand of capitalism would—were it not for the fact that it is a roaring success—be an economic absurdity.

It is because it works that Hongkong can, for the most part, get away with what looks like murder to the outsider. Thus it is that the territory's two universities and one polytechnic, cast in the role of purveyors of high-class labour to industry and commerce, accept this task apparently gladly.

Funding, certainly by British standards, is generous, salaries and conditions of service are exceptional, especially for expatriates, and, importantly, research can be got on with. Academics troubled by notions of being "used" can also console themselves with the thought that Europe's ancient institutions of learning originated to train professionals.

But if the tertiary sector is now being expanded, the growth is taking place within strictly controlled limits. Graduate manpower needs are calculated as rigorously as in the most centrally planned economies of eastern Europe.

No bones are made about this. As Mr Eric Ho, who as social services secretary holds the territory's education portfolio, says: "We must not give people expectations in higher education and then have no jobs to offer them. That would be a red for our backs and a misuse of public resources."

His fears are repeated, more colourfully, by Mr Colvin Haye, acting director of the Education Department: "We must tiptoe between the Scylla of underprovision and the Charybdis of overprovision. If the balancing acts fails we shall have social unrest."

With anxieties like these, why has it been found necessary to expand higher education at all? One reason is that compulsory schooling, which has hitherto ended after six years of primary school at about 12, is being extended to the end of the third year of secondary school.

One reason for *that* change is to meet growing international trade union and EEC allegations that the success of Hongkong's export operations rests on sweated child labour. Simply put, industry, particularly the textile sphere, fears substantial blacking of its products.

At the same time, the Governor, Sir Murray Maclehose, is variously reproached with "being soft on social welfare" or "giving in to Whitehall pressure" to raise the school leaving age.

Whatever the background, making children stay on till 15 is inevitably going to increase demand for more senior secondary education. That, in turn, will mean more pupils wanting to go on to tertiary education.

For the past year a Green Paper on senior secondary and tertiary education has been circulating in the territory. It is a major document in that it aims to chart the development of these sectors of education over the next decade—and, as one senior government official put it, "ten years is a hell of a long time in Hong Kong, given our political and geographical situation".

This autumn the Green Paper is due to go white. It is expected that provision will be made for up to 40 per cent of form 3 15-year-olds to go on to two more years of secondary education and that by the mid-1980s almost 20 per cent will be able to go into the sixth form. Arguments among "pro-treasurers" for 100 per cent secondary provision will be rejected as "unrealistic".

Expansion at the tertiary level will be significant. According to the Green Paper, the University of Hongkong will increase its enrolment from 4,450 in 1977 to 6,500 by 1987 and the Chinese University's numbers will rise from 4,400 to 5,800 over the same period.

The polytechnic currently has a total enrolment of 23,000, of whom 5,000 are full-time, 2,500 part-time day release and the rest evening students. It is expected that the number will go up to 28,800 by 1981, levelling off at about 29,500 by the middle of the decade.

Underpinning these institutions will be technical institutes (four of which are already operating) offering technician and craft courses, three teacher training colleges and the two private post-secondary colleges (described by the government as providing courses midway between A levels and first degrees, a description indignantly rejected by the colleges) which are "recognized" by the Education Department.

Much of the expansion will be centred on the new medical school being built at the Chinese University and the dentistry school now under construction at Hongkong University. Paramedics and technicians to service these two major projects are to be largely trained at the polytechnic.

In addition, much more emphasis is to be put on teacher training, with courses at the training colleges probably being extended from two to three years for all. And university graduates, who at present can go straight into teaching, will be encouraged to undergo crash courses at the universities.

Precise student demand is hard to gauge. Without doubt, it is the prospect of well-paid work which motivates almost the whole student body to study. A recent survey showed that polytechnic students' salary expectations were as high as those at Hongkong University; and there are on average nine applicants for each polytechnic place as against only three at the two universities.

Significantly, there are as many Hongkong students studying abroad as in the territory. In California, Hongkong students account for a third of the state's foreign student population. Canada, too, is popular, as is Australia. At university level Britain—because of high fees and perhaps even higher admission standards—is often lived a miss; but there are, of course, several thousand Hongkong students in Britain doing non-university courses.

Hongkong is a "working class" society and this is reflected in its student profile. By British criteria, more than half its students are working class as against 15-20 per cent at universities in western Europe. Almost all live in appallingly overcrowded conditions, where study is virtually impossible.

Nearly the whole population of 4.5 million—larger than New Zealand's, for example—is squeezed into an area about the size of Birmingham. Consequently, university halls of residence are limited: only 18 per cent of Hongkong University students are housed and even at the spectacular campus of the Chinese University out at Shatin in the New Territories the figure is only 45 per cent.

Although building work is now going on at HKU, particularly, to improve the situation, there is little doubt that home conditions are a factor in the rush to study abroad.

Many of those going overseas are among the territory's brightest and best. Quite simply, they want a wider range of experience than the geographically and culturally isolated and cramped confines of the colony can offer them. Many, too, are those who have failed to get into a Hongkong institution. A good number of these head for the United States, although employers have to be satisfied on their return that their degree is worth more than the paper it is written on.

But perhaps the crucial inducement to study abroad is the chance to perfect one's English, a mastery of which is indispensable if one is to "get on". Not to put too fine a point on it, command of the language among most Chinese is poor.

The reasons are many. Hongkong Chinese speak Cantonese but, because this is not a written dialect, have to write in Mandarin. They are taught in these two disciplines until 12, when over 80 per cent of those staying on transfer to English-medium schools.

Here, their development in Cantonese and Mandarin often comes to an abrupt halt. Having to learn in rudimentary English inevitably holds up academic progress. Their teachers, all Chinese, are products of the same predicament.

It is the language problem which is at the root of one continuing bone of contention between the Chinese University and the Government and the UPGC.

To get to Hongkong University students have to take A levels at the end of two years in the sixth form. But they can go to Shatin after one year of study in the sixth by taking the Chinese University's matriculation examination.

This arrangement allows the Chinese University to argue that its undergraduate courses should last four years instead of the three at HKU. Much of the extra time, especially for science students, is spent on language work.

The White Paper is expected to confirm the phasing-out of the two separate examinations and their replacements by a new common examination based on a new common sixth form course. The Government would then like to see the Chinese University reducing its courses to three years, thus making way for a further increase in students at little extra cost.

Little progress is likely on this, however, in the foreseeable future. Nor is the Chinese University so far swerving in the face of repeated urgings from the UPGC to produce five-year instead of six-year courses for the new medical school.

Without doubt, both more medical training facilities and the new dental school are badly needed in Hongkong. No university dental courses exist at all at present, and all dentists have therefore to be either imported or sent abroad for training.

Medicine, on the other hand, has a long tradition in the territory. Hongkong University itself started off life in 1887 as a medical school for Chinese and the school retains its prestigious position today. It is estimated, however, that 250 new doctors a year will be needed by 1990, and even more, perhaps, by the year 2000, when the population is expected to have grown to over six million.

Much of the new population will be out in the New Territories, the 370 square miles of the colony leading up to the border with mainland China.

At present nearly all the population is squeezed into Kowloon and Hongkong island, but new towns are being built where possible in the steep, hilly hinterland.

What has held back development, of course, has been fears about the intentions of the Communists when the New Territories' lease runs out in 1997. But the last thing the Chinese want is to disturb the Hongkong status quo: it is a massive earner of foreign currency for Peking and a crucial diplomatic listening post.

The Chinese have persistently let it be known that for them 1997 is a non-date since they have never recognized the validity of the agreement signed between Britain and the rulers of imperial China in 1898. Importantly, they have also put their money where their mouths are by investing in land, factories, banks and shops on a major scale in Hongkong.

It is because the Chinese University is situated out in the New Territories and because a huge new hospital is being built to service the neighbouring expanding city of Shatin that the go-ahead was given for a second medical school rather than for further development of Hongkong University's facilities.

This arrangement, however, is certain to cause difficulties. Academic and para-medical staff—except at the most senior levels—need to be able to speak Cantonese. In other words, there can be only very limited expatriate recruitment for the new medical school. And therefore only a very limited pool of talent to choose from.

Equally important, perhaps, is where the para-medical and other back-up staff are to come from. Here, the polytechnic is embarked on a crash programme of training technicians for both the medical and dental schools—but there is great concern that the exercise will turn out to be too little and late to prevent unsettling stagnations of staff.

Expatriates are normally an essential part of most departments in the territory's tertiary education institutions. "Localization" programmes have been hampered by the fact that so much work is in English—and will remain so.

Hongkong University, indeed, will have no truck with "positive discrimination" recruitment policies. "We simply take the best", said one senior official proudly. And the best usually, for HKU, means British: well over half the academic staff are expatriate and at the professorial level the percentage is still higher.

Australians and, to a lesser extent, Americans also work in significant numbers on the campuses—and even the Chinese University has a sizable minority of non-Chinese academics.

The attractiveness of Hongkong for British academics is not hard to find. At the professional level, money is available for research, positive planning can be done and there is an absence of the niggling cutbacks and financial hassles which characterize so many campuses at

cont. on page VIII

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Hongkong University is the territory's oldest and most prestigious institution of higher education. It developed at the height of Britain's colonial presence. Paul Moorman reports.

The very model of a British redbrick university

Founded in 1911 out of the old College of Medicine for Chinese, Hongkong University was, until 15 years ago, the only university-level institution in the territory. The aura of pre-war redbrick is strong; the place has the quiet confidence of a campus with a long-proven track record. It is, according to one of its senior members, "a corner of British academic life in a foreign field."

HKU's parentage is one hundred per cent British and the traditional ties with the "home country" remain umbilical. There is no hint of any American way of doing things as there is increasingly in some Hongkong spheres. As Mr Norman Gilfanders, the university's secretary, says: "If we have a problem we look at how it would be tackled in Britain. We are not influenced at all by the United States or Europe."

Thus, undergraduate courses are nearly all three years; the university sets A level examinations and requires its applicants to have passed these; all teaching, except, of course, Chinese studies, is in English; and in 1975, when the university was asked to revamp its structure of academic governance, it was Sir Douglas Logan, the former principal of London University, who was called in to advise.

The university is a keen member of the Association of Commonwealth Universities and the Inter-University Council for Higher Education Overseas. Some 40 per cent of the academic staff is expatriate, the vast majority from Britain; the figure is even higher at professorial level. Standards in "professional" courses are closely linked with the requirements of the appropriate institutional body in Britain. There is an external examiner system.

Overwhelmingly, the brightest and best of Hongkong's students inevitably opt first for HKU—unless, that is, they decide to study abroad, as increasingly many do, or they want to do a specialism that the polytechnic or the Chinese University concentrates on. But such gaps in HKU provision are rare.

Graduates of HKU have been educated in English—an essential asset to a good career in the public service or in business. It is the passport to a highly paid job; and it is that which seems to motivate students in Hongkong more than in almost any other country.

So central is the psychological role of English that students waiting to study European languages such as French and German do so under the auspices of the English department. Which is not to say that standards in the language are necessarily high. As Dr N. C. Lee, dean of the faculty of arts, the largest in the university, says: "Competence in English language is going down all the time. This may be part of the same phenomenon affecting universities in Britain and the United States. But at HKU, where we are teaching in a second language anyway, this makes the maintenance of standards even more difficult."

Some academics, naturally, bemoan what they see as the narrow vocational role the university is called upon to play. At least two professors called the students "fodder for the government and business." Another, rather forlornly, said: "We try to provide an education for living, not just for getting a living, but I'm not sure how many students realise this."

Most, however, simply get on with the job of trying to turn out the best products for future employers. The university, in spite of all its Britishness, may look like Hongkong University Inc to an outsider. But, as one is told, that indeed is an outsider's view and not relevant. The university is serving a part of the developing world.

Set in 40 acres on the north western slopes of Hongkong Island off the Pokfulam Road, the university's reputation for academic excellence has long been combined with an image of stand-offish elitism and lack of concern for the ordinary problems of the community.

It is a reputation which Dr Raymond Huang, the vice-chancellor, agrees, may have been to an extent warranted in the past. The remoteness may certainly be at least partially explained by the fact that Dr Huang is the first Chinese to head the university in its history. All other vice-chancellors have been British and largely unable to speak Cantonese.

Appointed in 1972, Dr Huang, a distinguished chemistry graduate of HKU who got his doctorate at Oxford and who was previously vice-chancellor of the University of Nan Yang in Singapore, sees a key part of his brief to develop what he calls "the Hongkongness of HKU".

For Dr Huang, developing the Hongkong aspect of HKU means taking advantage of the fact that, since the closing of the border with the mainland, the territory has forged an identity of its own —based on hard work and an aggressive brand of laisser faire free enterprise: it is one of the university's important tasks to articulate this identity.

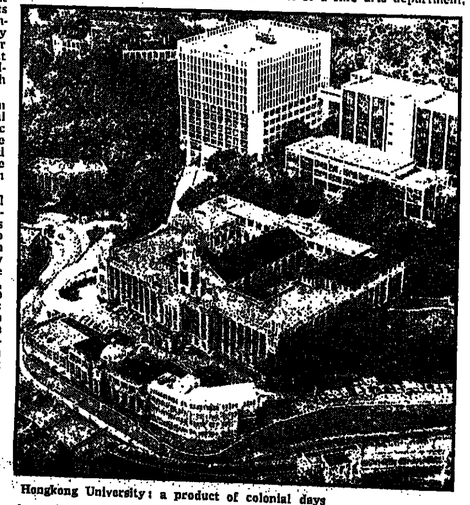
Another is to serve the community more than in the past. Dr Huang acknowledges that much has still to be done ("universities by their nature tend to change slowly and in any case we have always been conservative in our image-selling") but he points to work being done in the sociology and social work fields and to such schemes as the free legal advice centres being operated by the law school in conjunction with the social services authorities.

And there is, of course, medicine, the rock on which the university was founded.

A third task of HKU is to promote the cultural flow between east and west. It rejects indignantly the claim of the Chinese University to be the body best suited to this work. The university's Ordinance of 1911, for example, expressly speaks of "the development and formation of the character of students of all races, nationalities and creeds and



Dr Huang: first Chinese to be chancellor



Hongkong University: a product of colonial days

ambitious new dentistry unit will soon become a school.

Arts is the largest faculty with 850 students, 538 of whom are women. Most of these graduates will go into teaching or the civil service. It is followed by medicine, with an enrolment of 760. Of the 700-plus engineering students, only eight are women. The smallest unit is law, with nearly 150 students. Overall, about one in three students are female.

At the post-graduate level, students can work for two types of "research" degrees: an MPhil, which normally takes between 21 months and four years, and a PhD, which lasts between three and five years.

Additionally, there are so-called "coursework" higher degrees, where candidates have to follow courses, do practical work and take exams as well as submitting a dissertation or essay. Two-year courses lead to a Master's degree in arts, social sciences, business administration and science (engineering). From this year, Master's degrees in medical science and education are also planned.

One post-graduate focal point is the Centre for Asian Studies, set up in 1967 to serve as a rallying point where all departments with interests related to east and south east Asia can bring together their research projects and graduate students in interdisciplinary seminars. It also attracts to the university scholars from elsewhere and awards post-doctoral fellowships.

Other specialist centres are the electronmicroscope, the media resources, the radioisotope and the electronic services units, and the important language centre, which includes the large remedial English section.

For the triennium 1978-81, Mr Murray Dudgeon, the university's registrar, points to developments in the pipeline such as the establishment of a fine arts department, the coming of the major dental school, the introduction of a Master's degree in medical science, more computer science, expansion of the school of education together with a Master's degree in education, and, later, the setting up of urban studies and music departments, the latter to link with the foundation by the government of a conservatoire.

A joint training centre with Singapore to produce pre-clinical medical teachers is also to be created. Here, the planned new medical school at the Chinese University has led to serious fears of a "brain drain" of the most talented young HKU academics and paramedicals, tempted as they are likely to be by the prospect of immediate promotion to fill top jobs.

The section of HKU fought strenuously for the university, with its long tradition and experience in medicine, to take over responsibility for expanded medical studies, with HKU getting the sole control of much-needed dental school and also a major new hospital being built to service the New Territories, when the Chinese University is situated the day went against them.

Expansion of the education sector has been made urgent by the extension of compulsory education to form 3 of the secondary sector, that is, until the age of about 15, from the until now age of about 14.

With the dental school taking much of the university's development cash, a deficit budget is having to be introduced for the first time. About HK$7m (around £750,000) is being earmarked for this year. The money, says Mr Gilfanders, will only maintain services, not be used for expansion. Numbers are due to grow to 5,300 by 1981 and the University Grants Committee, Polytechnic simply had not allocated enough funds to deal with the expansion "properly".

Not that HKU could remotely be called hard up. It has an endowment fund of HK$270m, largely made up of individual gifts since the Japanese war reparations. Last year, over 10 per cent of the university's income came from dividends and another 6 per cent plus from student fees. But the vast majority, almost 80 per cent, came from the government through the UPGC. In the period 1974-78, the university was allocated HK$338m for recurrent expenditure.

A massive building programme is also taking place. In the early 60s it was the Chinese University with its beautiful site at Shatin being developed, which got the money. The early 70s saw huge sums being poured into the construction of the polytechnic. Now it is the turn of the HKU.

In addition to the dental school, the engineering and science departments, currently housed some way away on the other side of the Pokfulam Road, are being relocated on the main campus at a cost of HK$70m. The work is due to be completed by late 1980.

And a new hall of residence and student amenities building is also being constructed, costing HK$16m. More accommodation for students is urgently needed. The university was totally residential, but the numbers now housed in halls of residence have dwindled to 18 per cent.

With the university employing so many expatriates, much effort has to go into providing a pool of accommodation for them. HKU owns some 200 flats but additionally has to spend around HK$18m in leasing property. Staff have to pay 7.5 per cent of their salary back as rent, but even so the outlay is heavy for the university.

Despite the expense of expatriates (only senior Hongkongese staff are housed, compared with all expatriates) Dr Huang feels the system is a good one. The constant flow of new blood brings in new ideas and means promotions are not unduly frozen. Sometimes the quality of expatriate applications may have been a little uneven, but now, says Dr Huang, "we are recruiting from the jobs rut in Britain".

S. C. Loh on the progress being made in translating Chinese into western languages by machine

Unscrambling the inscrutability of Chinese characters

Most westerners Chinese, particularly the written language, has always been a source of wonder. Because they have known the alphabet since childhood they can hardly believe that the ideographic characters of Chinese can possibly convey the whole meaning of human speech. Even without the added complication of ideographic writing, there is so difficult that it is now unlikely that many westerners will ever learn it well.

Machine translation of Chinese would seem to offer the only practical means of giving the West ready access to the knowledge, culture and philosophy of a quarter of the human race. China, with a population of more than 800 million is currently publishing in newspapers, journals and books about six billion words a year. Much less than 1 per cent of this vast volume of material is being translated and published in English, French and German although a larger percentage is unquestionably being translated into Russian, but yet much of this material would be of great interest to one international research group or another.

The history of attempts to build a machine capable of translating from language to language has not been very serious. There has probably been no other scientific undertaking in which so much money and resources have been spent and where so many projects have delivered so little.

In the late fifties and early sixties, especially after the spectacular political demonstration in 1954 of the Georgetown system which successfully translated Russian into English with a vocabulary of 250 words and six syntactic rules, numerous universities and research institutes were given grants, in return for which they promised to deliver, in a very short time, a complete computer programme or even a specially designed computer system that could produce high-quality translations automatically.

The events that brought this honeymoon era to a sudden halt are, by now, well known even to those with minimal knowledge of automatic translation. When the promises failed to materialize, the National Academy of Sciences in 1964 established the Automatic Language Processing Advisory Committee (ALPAC) and ordered a thorough investigation into machine translation research.

The ALPAC report, *Language and Machines*, was published in November, 1966. In concluded that there was no possibility of producing a satisfactory machine for translation in the foreseeable future and recommended that no further funds be spent on contracts that had such development in view. Reactions to the report were predictable. For almost 10 years any application for a research project involving language and computer, however modest or sound, could expect a swift and categorical refusal.

Machine translation research at the Chinese University of Hong Kong was started by the present author in late 1969, at a time when most of the research activities in Europe and the United States had ceased. The object was to study the possibility of automatic translation from Chinese into English by computational techniques.

The preliminary survey, which studied the general structures and linguistic complexity of the Chinese scientific texts, mathematics and physics in particular, both syntactically and semantically, indicated clearly that mathematics, being an exact science, was relatively easy to tackle, but that Fully Automatic High-Quality Translation (FAHQT) was extremely difficult, if not impossible, to achieve. The survey indicated that some practical machine translation system involving the collaboration between man and machine was feasible.

In September 1971, the machine translation project was formally launched with a grant from the ASIA Foundation. The aim of the project was, of course, the collection and study of linguistic data of both the Chinese source language and the English target language, in the field of mathematics, for the purpose of designing and constructing a practical machine translation system. The proposed system, when completed, should be capable of translating Chinese mathematical texts, taken mainly from *Acta Mathematica Sinica*, into readable and grammatically correct English.

The first machine translation system, CULT (Chinese University Language Translator) was designed and tested in October 1972. In subsequent years, many improvements and modifications have been made to the system. Difficulties encountered in linguistics, in terms of syntax and semantics, and in computer programming have been rectified. As a result, CULT has become more refined in structure and efficiency.

Since January 1975 CULT has been used regularly in translating *Acta Mathematica Sinica*, which is published quarterly by the Academy of Sciences, Peking. The subscribers are mainly well-known international university libraries, mathematical institutes and research institutes.

The capability of CULT has been further developed to assist translation in both directions; that is, CULT is now capable of supporting translation from Chinese into readable English as well as from English into readable Chinese, and can be truly considered as a dual language translator.

This April, a research centre for machine translation (named after the donor, the late Mr Hung On-To) was established at the Chinese University. Its first task is to develop a Chinese input keyboard for the computer system. Many Chinese input systems based either on corner shapes of the characters, or on Pin Yin (pronunciation), or on a Chinese typewriter keyboard with a few thousand keys are commercially available. The widely publicized cylindrical Chinese typewriter keyboard which has been developed by the Chinese Language Project, Cambridge University, is the latest one to be introduced to the market.

None of these input systems possesses the most desired characteristic of being easy to learn and operate. Most, if not all, require extensive training of the operator. For simplicity, the input of Chinese characters to the computer system should follow the natural order of how they are written by hand—the way children are taught to write Chinese characters.

This kind of stroke-approach, though theoretically sound, is impossible to implement due to the richness of the language and the infinite combination of strokes that go to make up Chinese characters. However, a feasible way is to employ the "radical" approach; in other words, to represent on the keyboard the most frequently used radicals of the Chinese characters.

For the past five years, we have studied the structures of the Chinese characters and designed a new set of modified radicals which total barely over 200 in number. A keyboard based on this design approach has been constructed and initial test results are satisfactory. On the average, 2.3 keystrokes are required for each Chinese character. The arrangement of the keys on the keyboard is usually according to their normal position in the character, that is, a radical if normally at the top of the character is placed on the upper portion of the keyboard and so on.

The main advantage of this approach is that it is simple and natural for any person with a minimal knowledge of written Chinese to operate the keyboard with relatively little training. The keyboard, we believe, will have a profound impact on the typesetting industry for the Chinese language.

With the completion and implementation of input/output devices to complement CULT, the machine translation of Chinese into English steps into a new era. However, the translation of one natural language into another one and vice versa is not the end-product of our project.

The centre for machine translation at the Chinese University looks forward to building and implementing a multi-language model. We have ample reason to believe that a multi-language translation programme model is possible.

The underlying logic behind the proposed model would be similar to CULT. Different input/output devices would have to be designed. With growing needs for rapid translation of scientific and non-scientific materials demanded by international organs such as the United Nations agencies and the EEC, automatic translation offers the only realistic hope of tackling this task.



Traditional Chinese letter-writer

Professor S. C. Loh is director, the machine translation unit, the Chinese University of Hong Kong.

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The polytechnic: in business to serve the needs of business

Hongkong's booming polytechnic "does not pussy-foot about abstract things like academic freedom". Instead it concentrates on delivering the goods—skilled manpower—to commerce and industry.

Hongkong's polytechnic was born with a silver spoon in its mouth. Created in 1972 out of the old Hongkong Technical College, its prime purpose was to supply the territory with the higher technicians which industry and commerce needed. As such, it was given a flying start in life by a government whose proclaimed role is to serve the interests of business.

The polytechnic has developed into a lusty infant. In 1972 it had 1,700 full-time students, a mere 740 part-time day release students and 9,300 enrolled in evening courses. Today, it has a total of 23,000 students, of whom 6,000 are full-time and 2,500 day-release.

More, though less dramatic, expansion is planned in the coming triennium: by 1981 there should be over 28,000 students in all and by the mid-1980s the number is expected to have grown to just under 30,000. There it will level off. The polytechnic is, openly and unashamedly, a conveyor belt churning out the skilled manpower required by industry.

Efficiency is what the polytechnic is all about. As Dr Keith Legg, the thrusting former director of Lanchester Poly, who took over at the helm in Hongkong in 1975, puts it: "We are a business: we need to be efficient."

Poor English is the biggest fly in the polytechnic's well-oiled machine. It is something that all the sophisticated planning, data banks and advanced computers used to develop the institution in so many areas cannot overcome. Hard slog is the only way forward: so English is the largest department in the polytechnic.

The polytechnic is unique in Britain and the Commonwealth in that it is separate from the government and at the same time funded by the same grants body which services the territory's two universities. When the polytechnic was founded, the existing University Grants Committee expanded to become the University and Polytechnic Grants Committee.

This special status and unusual marriage with the universities means that the word "polytechnic" means something different in the Hongkong context from what it does in Britain. Dr Legg is in no doubt that the arrangement is a good one: "We have a better relationship with the two universities than they do with each other", he says cheerfully.

If the polytechnic has privileges of heavy funding and all the resources it needs, it also has duties that go with these which clearly limit its autonomy. It is there to satisfy industry and is given no chance to forget this.

More than a quarter of its executive board are members of the civil service and the most powerful individuals on the board are the representatives of big business and the banks. All council members are appointed directly by the Governor. It is here, rather than in any academic circles, that the polytechnic's policies are made.

This, everyone seems agreed, is as it should be. "We know why we are here and we think we are providing an essential service to the community. We do not pussy-foot around, worrying about abstract things like academic freedom", said one senior administrator. "The polytechnic has a brash, bullish and "we are winning" air about it.

Yet it is here that one of the few important areas of fundamental disagreement about how the territory's tertiary sector should develop over the coming decade is taking place. It is the issue of degrees.

Full-time students can enrol for two-year Diploma courses, three-year Higher Diploma courses or for Associateships, which take another year at post-Higher Diploma level. It is generally accepted that these Associateships are equivalent in standard to first degrees.

That is good enough for Dr Legg. "We should be able to reward the minority who reach the top with the top award—and in Hongkong that means degrees."

The arguments against, however, have come from many sides. There is the problem of validation. It would clearly not be politic for Hongkong University, the territory's oldest-established institution of higher learning, to undertake the task—even if it wanted to.

Dr Legg does not see validation as an insuperable hurdle. He would like to see the British CNAA do the monitoring, though he recognizes that this would mean a change in that body's charter.

And he is keen to have some courses validated by the Technician Education Council and the Business Education Council. He sees such moves as opening up the way for Hongkong's own independent validating authority in the long term, perhaps to be called the Academic Awards Body.

Such a body could validate the craft and technician courses being done at the territory's four existing technical institutes and the two new ones which are now being developed.

It could also take under its wing the Baptist College and Shue Yan College, the only two of the territory's numerous private post-secondary colleges which have been "recognized" by the government.

But it is not validation which has been the main stumbling block in the polytechnic's quest for degree-awarding status. Opposition within the government and, particularly, within the institution's own governing council has been strong.

A powerful school of thought has argued that degrees would dilute the energies of the polytechnic. "Havos" would create "have nots" and work vital to industry and the growth of commerce could find itself downgraded. There could, too, be too many degree-holding graduates without work matched to their qualifications.

It appears, however, that Dr Legg is not winning, at least not losing the fight. Indications are that, despite reservations in the UPGC, he will be given at least some encouragement in the White Paper. But there will have to be plenty of assurances that 20 per cent degree work is not going to take up much more than 20 per cent of the polytechnic's efforts.

Situated on a 25-acre campus in Hung Hom, Kowloon, near the cross-harbour tunnel which links Kowloon and the New Territories to Hongkong Island, the polytechnic is in the middle of a multi-phase building programme to go with its expansion of student numbers.

Phase 1 of the programme was completed in October, 1976; with over 52,000 square metres of floor space it provides 90 classrooms and tutorial rooms, four lecture theatres, 30 laboratories, office space and a library with 3,000 much needed study places and an ultimate book capacity of 400,000 volumes, which will make it, when fully developed, one of the largest libraries in south east Asia.



Dr Legg: 'we need to be efficient'

Phase 2, which is just being completed and consists of a sports centre, including a multi-purpose gymnasium, and a community building for students. The new Institute of Textiles and Clothing has also been built within phase 2. Work on phases 3 and 4 will go ahead as future needs develop.

Academically, the polytechnic is split up into four divisions, each headed by an associate director. The divisions are: applied science, commerce and design, engineering and, interestingly, part-time and short course work.

Fifteen teaching departments are grouped under the first three divisions and in addition there are the Institute of Textiles and Clothing, the School of Social Work and the new Institute of Medicine and Health Care, which concentrates on paramedical programmes in physiotherapy, occupational therapy, optometry, radiography and medical laboratory science.

On paper the standards are high. There are nine applications on average for every place as against three at the universities. In subjects such as accountancy, where the syllabus covers all the requirements of British professional accountancy and where graduates can thus register as recognized accountants, there are around 60 hopefuls chasing each vacancy.

So the polytechnic can often pick and choose its students. With A level results averaging just over three Cs, the undergraduate intake, says Dr Legg, is a shade better qualified than in British universities. Of 1977's graduates, more than three quarters found work suited to their qualifications, 16 per cent went on to further study. By last October, only 6 per cent were still unemployed.

Another area where there is cause for concern is the reluctance of employers to release staff for sandwich courses. Virtually only such courses now leading are in the textiles field.

The polytechnic is tackling the problem by sending out staff wherever possible during their vacations to get them industrial experience and by the creation of an industrial centre on the campus where they get much-needed practical training.

Great importance is also attached to the needs of part-time and part-time students, and for this reason that a special division under an associate director has been created to oversee their programmes.

Dr Legg says: "With so many of these students, the number of graduates for short of the United Kingdom's total poly population in the evenings. The courses allow people who have to work full-time to study and get upwardly mobile. So we have made a firm decision that the standard of entry will be the same as during the day."

An early priority when Professor arrived at Hung Hom was the introduction of a Management Information Unit. A data bank has been set up to help planning, steering and resources distribution. "Instead of holding up a bit of gold and saying 'bid', we ask departments to specify numbers of students and levels. The computer processes this information and we balance with our priorities", says Dr Legg.

An additional important role for the computer is sifting the thousands of applicants for places. "We get many with a variety of qualifications and hoping to do courses at many different levels."

Paul Mas

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Physical education class: qualified teachers are hard to find.

Teacher training prepares for major upgrading

by Alan Brimer

Necessity sometimes breeds patterns of teacher education, which otherwise would not be tried, even if they were conceived. Emergency teacher-training after the 1939-45 war, in which one-year courses converted ex-service men and women into some of the most effective teachers in post-war English schools, is one such example.

In Hongkong, an expansion of secondary education combined with a desire to raise the quality of preparation for teaching among graduate teachers created the necessity. An additional ingredient was the inability of young graduates to afford an extra year in full-time professional studies.

In 1976, with 4,931 of the 6,862 *graduate* teachers unqualified, and 3,457 of these in private schools which gave no inducement to qualify (in the public sector there was the benefit of one increment) the situation was by no means conducive to recruitment into professional courses.

Hongkong University's school of education with a staff of 18 was already offering two-year, part-time evening courses to 276 graduate teachers in service and virtually as many one-year places to full-time students as it could attract; in their straitened financial circumstances this was rarely more than 60.

The difficulty with evening courses is that the number of hours available is small. Granted that teaching "practice" for evening students takes place during normal day-time teaching, this still leaves 258 hours of course work to be fitted into attendance on two evenings a week over two years.

By teaching four evenings a week for 24 weeks to two groups of students throughout the academic year, the product is 144 hours of course work for each student whereas four weeks' full-time teaching yields 64 hours. If only the under-used teaching capacity during the day could be re-deployed, the number of students could be greatly increased. Unfortunately practising teachers cannot be released during the school year and the summer vacations are unsuitable, partly because of the high temperature and humidity and the risk of typhoons and partly because of competing activities related to the teachers' own jobs.

Moreover, to develop the skills and attitudes of practising teachers already habituated by years of experience to the conventions of formal, examinations-dominated schools is both more difficult and less effective than to do the same for those who have been exposed only as pupils. Were it possible to attract and hold fresh graduates in professional courses, the medium and long-term benefit to teaching would be greater. It would be greater still if the professional course could be extended into probationary service. If the choice between target groups were possible and necessary, the young graduate would be preferred. Once defined in this way the solution suggests itself.

Immediately after completing their degree examinations students would be admitted to a full-time, one-month course concentrated on the curriculum, methods and skills of teaching their major and minor subjects. They would enter teaching in September as full-time teachers and attend the school of education for one evening a week for two hours. During the first year, the concentration would continue to be on curricula and classroom practices.

In the same period they would be visited in their schools by supervisors, who would assist them in adjusting to teaching and help them to maintain a professional attitude amid the pressures of the more traditional teaching surrounding them.

In their second year, they would, like other part-time students, take courses in educational theory during evening attendance on two evenings a week for three hours. In the same year, visits to the schools would continue and teaching would be assessed.

For Hongkong University undergraduates, the benefit of the new scheme is considerable. At the most mundane level, the grant which they may have been receiving and which would otherwise come to an end when the university term ceased, will be extended over the June programme.

At a much more important level, undergraduates will be assured of entry to the Certificate of Education programme, which ordinarily they would have to wait some three years to achieve, since the number of serving teachers seeking admission to the in-service entry, part-time programme is so large that preference is given to the longer-serving members.

Perhaps the feature which undergraduates may take most account of is that their chances of being accepted for teaching will be much improved by the fact that they have already had some preparation for teaching and that they are registered for the programme.

From a qualified teachers supply point of view, the new scheme provides a planned route to a fully qualified graduate teaching profession. Each year 240 graduates entering teaching will receive their professional preparation as a matter of course, in contrast to the parlous situation in our full-time programme. Since the Chinese University of Hong Kong is also expanding its intake of students in a different pattern of studies the combined effort of the two universities is likely to achieve the intended goal.

The weight of student numbers on the school of education from the addition of the pre-service and in-service entries to the part-time programme may be judged from the fact that in any one year from 1979-1980 there are expected to be 672 students registered for the certificate as compared with the 330 at the highest point of the last quadrennium. To meet these numbers, expansion of staff is obviously necessary but to increase staff membership on the existing pattern does not make sense.

In each area of the secondary school curriculum, normally designated as a "subject", past practice has involved the appointment of university lecturers who are experienced, trained, graduate teachers possessing a higher degree or some further qualification that enables them to claim an extensive knowledge of the curriculum area at a more general level than its particular application in Hongkong.

Once each curriculum area has been so staffed, the option is either to appoint a second such person to deal with the increased numbers or to seek another form of provision. To appoint a second person to a curriculum area implies a permanent appointment and a commitment to staffing that curriculum area at the same level until the retirement of one of the lecturers. Meanwhile, the short-term needs in school curriculum areas shift as Hong Kong adjusts to the educational needs of the population.

There may, for example, be a need for a large number of geography teachers in one year, but since geography is a subject with minor claims upon the timetable, it is unlikely that the numbers would continue at that level. The pattern of permanent appointment to certain particular curriculum areas would not serve the school of education's needs and an alternative proposal, approved by the University and Polytechnic Grants Committee, was that the university should seek the creation of a grade to be known as "teaching consultant".

Teaching consultants would be appointed on the first part of the lecturer scale on local terms of service and would be recruited for only one or two years. Those recruited would be serving graduate teachers, who would, on completion of their period as teaching consultants, return to the education service.

Such appointees would have the advantage of being able to look at teaching and educational provision in a variety of schools and perhaps of combining their period of service in the university with admission to the MEd programme.

It has been agreed that the five lecturerships allocated in the first year of the triennium may be held as nine teaching consultantships, so that each curriculum area can, if need be, have a teaching consultant attached to it. There will be the additional freedom in years in which student numbers in one subject area are high to redeploy appointments.

There are undoubtedly difficulties to be overcome. Some students have failed their final examinations and they will be re-taking them or following third-year studies again next year. Some students have been offered jobs in other fields and have dropped out. This was, of course, anticipated and 262 students were admitted with the expectation that numbers would drop to 240. Interviews for jobs have also disrupted the programme to a minor extent but by running two groups, those attending mainly in the morning and those mainly in the afternoon, it has usually been possible to make up work that has been missed.

Professor Alan Brimer is head of the school of education, the University of Hong Kong.

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Academic internationalism with a Chinese face

Paul Moorman on how the Chinese University is overcoming its growing pains and developing its own special contribution to Hongkong's higher education.

Hongkong's Chinese University has had a chequered life in its short history. Conceived in something of a hurry and a muddle it has inevitably found itself in the shadow of the prestigious and established Hongkong University. But now, 15 years after its inauguration, it is steadily forging its own identity.

That identity, according to Dr C. M. Li, the founding vice-chancellor of the university who is now retiring, is based on the integration of east and west cultural and intellectual traditions by developing what he calls "Chinese data" in the various academic disciplines.

This, Dr Li emphasizes, does not mean that the university's concerns are somehow nationalistic or chauvinistic. Rather, the aim is to harness the original insights of Chinese learning to the techniques of western scholarship.

In some spheres, notably natural sciences, a western preoccupation, it has sometimes been difficult to bring the Chinese dimension to bear.

But interesting work is being done by interdisciplinary groups on the physiological, social and medical effects of acupuncture and on the production of mushrooms using industrial waste, notably by growing them in the mountains of tea leaves left over by the world's most enthusiastic race of drinkers of that beverage.

One major research project, headed by Professor H. M. Chang of the chemistry department, is into Chinese herbal medicines. The aim of the research, says Dr Chang, is not so much to try and discover new herbal remedies but to use new science to help make best use of traditional medicines.

The research goes back for its inspiration to the Peng Tsao, the written records of medical treatment produced by the doctors of the Chinese Imperial court as long ago as the year 800. "We know these herbs work", says Dr Chang, "the physicians of those days had to be very careful. It could be pretty dangerous if you killed an emperor."

Thus, it is widely recognized that gardenia can help cure jaundice and that the Chinese motherwort (*leonurus artemesia*) has contraceptive properties. Biochemist Dr. Y. C. Kong, who is working on the anti-fertility project, believes that in the future it will be "literally possible for people to grow their own contraceptives in their back garden".

How seriously the research is taken is shown by the fact that the World Health Organization has designated the Chinese University as one of six centres around the world to get backing for research into herbal remedies. The university was given a HK$700,000 subsidy in January by the WHO for the contraceptive work.

Much emphasis is put in the university on four research institutes for the furthering of the Chinese data aspect. The institutes are for Chinese studies, science and technology, social studies and the humanities, and business management studies. Major research projects are often hived off into special units or centres within the institutes.

In addition, the university's graduate school, set up in 1966, offers a variety of Master's degrees. No PhD work is done at the moment though doctorates in Chinese studies and, possibly, electronics, may be introduced in the next triennium beginning in 1981.

Now situated on a dramatic three-plateau site at Shatin in the New Territories overlooking Tolo Harbour, the Chinese University began life in 1963 on three separate sites in Shatin, Hongkong island and Kowloon.

After the Chinese revolution of 1949 and the mass exodus of refugees to Hongkong from the mainland, three Chinese-medium colleges were established in the territory.

They were Chung Chi College, formed from a number of previously Christian colleges in China; New Asia College, which incorporated the Nationalist government colleges, based on Confucianism, which had crossed the border; and United College, which grouped together some of the large number of small, private and usually poorly-endowed colleges which chose exile and which, in China, had belonged neither to the Christian nor the state networks of institutions.

By 1951 there were four pupils in Hongkong's Chinese-medium secondary schools for every three in the English-language Anglo-Chinese schools. In all, with the influx from the mainland, there were over 30,000 secondary pupils: and Hongkong University, the only university-level institution, had places for just 850 students.

Hongkong University, of course, taught virtually exclusively in English and thus a majority of the secondary school population was ineligible to apply. The qualifications gained at the three colleges were scarcely recognized by employers. Hongkong University was asked to expand and begin teaching in Chinese. It refused on grounds of cost and space.

Mr John (now Lord) Fulton, the then vice-chancellor of Sussex, was called in to advise on the development of the three colleges, which in the meantime, in spite of their often clashing interests and different intellectual backgrounds, had joined into the Chinese Colleges Joint Council in an effort to persuade the government to support Chinese higher education.

Early in 1963 the Fulton Commission recommended the setting up of a Chinese University and this was done later the same year on a basis of loose federalism. The first buildings on the new permanent Shatin site were completed late in 1968, but even as the colleges began to move to their new home they insisted on keeping their autonomy.

The result was a mess. The University and Polytechnic Grants Committee was sent three sets of accounts from the colleges plus another from the university. Haggling over who was responsible for what was endless. Academic development was fragmented. Eighteen per cent of the institution's finances went on administration in 1965 as against 6 per cent at HKU.

The government stepped in and called back Lord Fulton to make further recommendations, or, as one senior member of the university put it privately, "unscramble the chaos he had created".

This time the whip came out. Fulton, Mark II, abolished the three separate boards of governors and replaced them with trustees, whose powers were restricted to managing the assets of the colleges accrued *before* they linked up. All university decision-making was transferred to the central university authorities.

A formula was devised whereby the university was "subject oriented" and the colleges were "student oriented"; that is, they looked after the welfare of their students and organized tutorials on a collegiate basis. The new arrangements came into force last year. And although only 45 per cent of staff and students are housed on the Shatin campus, everyone is assigned a college to belong to.

One result of the previous unwieldy procedures and conflicting spheres of interest was that the university tended to suffer from a lack of recognition from the rest of the academic world. To get it such international recognition, says Dr Li, was one of the prime tasks he set himself.

Dr Li, a long-time professor of business economics at Berkeley in California, has been an enthusiastic backer of international and regional seminars at the university and many links with other institutions have been set up.

But here critics of the university say that while it claims on the one hand to be uniquely Chinese and on the other to be genuinely internationalist in approach, it is in fact primarily the American connection which counts.

Certainly, many of the expatriate staff are American and courses, nearly all lasting four years, are often modelled on American lines.

Joint programmes and exchanges exist with the universities of California and Indiana and with bodies like the Yale-China Association, the Wellesley-Yenching Committee and Princeton-in-Asia.

Additionally, the International Asian Studies Programme, which has recently begun and which this year has brought 60 students to Shatin interested in learning the Chinese language or doing Chinese studies is organized through the Yale-China Association.

But Mr Nelson Young, the university's registrar, points to the fact that the university is also an active member of the Association of Commonwealth Universities and the Inter-University Council for Higher Education Overseas, both, of course, primarily Commonwealth bodies.

One major plank for the justification of the university—to give higher education opportunities to the majority of secondary school pupils attending Chinese-medium schools and therefore debarred from HKU—has disappeared. Today, fewer than 16 per cent of pupils go to Chinese-language schools.

Despite this, the university continues to accept pupils—from either type of secondary school—after they have taken matriculation at the end of one year in the upper sixth form. They also take those who have applied to, and failed to get into, HKU, and those who—a distinct minority—who feel a "vocation" to study at the Chinese University.

The result of this early entry and the fact that, inevitably, the university often gets those students whose first choice may have been HKU, is that many need extra coaching, especially in English.

As Mr Young says: "To be an international university we need to be as bilingual as possible. Thirty-one per cent of our students still come from Chinese-medium schools and they need a lot of help. We do not regard English as a second language but as a worldwide vehicle for intellectual communication."

But he strongly denies that the extra year which CU students take over their degrees is due to their quality—many applicants, indeed, are turned away although they have the necessary paper qualifications. Competition is fierce and standards high.

Perhaps the major development at the university is the creation of the new medical school, which is due to receive its first intake in 1980. The school went to CU despite strong initial objections from HKU, which was, and is, worried that its staff might be "poached".

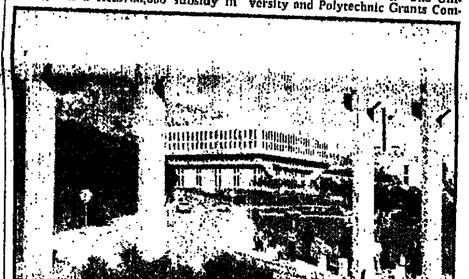
A basic medical building costing HK$12m is due for completion in 1980; it will be eight storeys high and cover 55,000 square feet. The 1,400-bed teaching hospital and clinical sections will be in the neighbouring new towns of Shatin and Tai Po. They will eventually meet the needs of a million population at a capital cost of around HK$400m.

The course will consist of a pre-medical year, two basic medical sciences years and three clinical years. Again, this planned six-year programme, as against five at HKU, has caused some reservations on the part of the UPGC. But the university has thus far remained adamant that it is this structure which is best suited to its needs.

Meanwhile, the incoming vice-chancellor, Professor Ma Lin, a highly respected bio-chemist at CU, looks set to continue the policy of internationalism with a Chinese face. Back from a trip to Paris arranging exchange programmes with French universities, he points to acupuncture experiments to cure drug addiction now being done in a local hospital as "an example of how we do Chinese studies".



Dr Li: 'Chinese data'



Entrance to the university's campus at Shatin

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Barry Burton on how Hongkong's libraries provide vital reading room for the territory's students

Libraries: the difficulties of booking a space to read

Hongkong is a crowded, compact, vertical metropolis. Many families living in government housing and resettlement estates, which provide accommodation for almost half of Hongkong's 4.6m population, have less than 2.2 square metres per person. These cramped conditions, usually without air-conditioning even in Hongkong's hot, humid summer, suffer from an incessant din from television, radio and mahjong tiles making it practically impossible for most students to study productively.

As a result, Hongkong students make greater use of libraries, or indeed any other suitable, convenient, air-conditioned space such as the airport or railway station, than in most other parts of the world. Great pressure is therefore placed on library seating in the few libraries that are available to students.

The library space problem is not improved by the cost of books, which often retail at 60 per cent or more in Hongkong than in their country of origin. This is due partly to the limited market, partly to the high rental costs for retail outlets and, in some instances, to excessive profit margins. While high prices may not handicap well-off students, most find they simply cannot afford to buy more than one or two of the books required for their courses. Consequently, they rely almost entirely on free borrowing services from the library in their particular institution.

To meet the need for recommended course materials in the quantity required, the books are purchased in multiple copies. To ensure maximum availability, their use is normally restricted to the particular library building during the day and to overnight loan when the library is closed.

The University of Hongkong's *library holds* many important materials. For example, the Robert Morrison Collection contains materials, mostly in English, from the nineteenth century and earlier. The Fung Ping Shan Library, founded by private donation in 1932, contains over 200,000 volumes of Chinese books and periodicals, including many rare books and manuscripts. And the Hung On-to Memorial Library contains a comprehensive collection of Hongkong materials. The total holdings of the University of Hongkong libraries passed the half million mark in 1976 and almost 5,000 serial titles are currently received.

The main Chinese University of Hongkong library is primarily a reference and research library for faculty, staff, visiting research scholars, and, of course, the students of the university. The branch libraries at each of the university's three colleges provide generous collections of books and journals for general education and support of undergraduate study and student-oriented teaching.

The library system holds the largest collection of Chinese materials in Hongkong: about 350,000 volumes with many rare items including Yuan, Ming and early Ching editions. In total the library system contains almost 900,000 volumes and 3,500 serials are received.

The Hongkong polytechnic library has a rapidly growing collection of 120,000 volumes, predominantly in the various engineering, applied science and commerce areas. Over 4,000 serial titles are received. Unlike the two universities, the bulk of the polytechnic's collection is in English — the institution's medium of instruction.

The heavy reliance by students on libraries for study space and for course materials has been well recognized by the University and Polytechnic Grants Committee, which has ensured adequate funding for the physical facilities required and in most instances has earmarked setting-up grants for the purchase of books and periodicals. For example, the polytechnic library received HK$3m (£350,000) in 1973 to add to a generous grant of half a million pounds sterling which was made available to the polytechnic by the British Government.

In all three institutions the level of recurrent funding for the library system has very rarely fallen below 5 per cent of the institution's budget. The norm is between 6 and 7 per cent. This is rather favourable when compared with most British university libraries, particularly as in Hongkong the budgets are padded by fringe benefits for staff such as housing allowances, overseas passages, education allowances and medical and dental treatment.

Each of the three libraries spent more than HK$2.15m purchasing books and periodicals in the fiscal year 1977-78, mostly from Britain and the United States. Fortunately, cushioned by the strength of the Hongkong dollar, which since 1971 1971 has appreciated 40 per cent against the British pound and 16 per cent against the United States dollar, Hongkong libraries have been little affected by the economic recession. In fact, the rate of collection growth has increased rather than diminished though some pruning of periodical subscriptions has taken place to make way for new titles.

Whilst there is growing concern about the adequacy of library accommodation at the University of Hongkong, the situation at the Chinese University and at the polytechnic is a cause for envy by most librarians.

The main library of the University of Hongkong was opened in 1961 and contains both the general library and the Fung Ping Shan Chinese library. Two additional floors were added to the existing seven in 1968. The main library building can seat over 800 readers and houses most of the university's half million volumes. Separate medical, law and education libraries are provided on the campus.

The imposing main library of the Chinese University, opened in 1972, can comfortably accommodate over 500 readers and 400,000 volumes on its 7,990 square metres of floor space. The building is well provided with study rooms, closed carrels, conference and seminar rooms, an audio-visual room, a photographic laboratory and a book bindery.

With three other library buildings on campus (those of the original three constituent colleges of the Chinese University) together with residential accommodation for a substantial proportion of students, there would appear to be no problems of accommodating books or readers in even the long-term future.

More recently, in February 1977, the library of the Hongkong polytechnic was opened by Princess Alexandra. This building, designed to meet the long-term needs of the polytechnic, has a total floor area of 17,850 square metres which will eventually accommodate 3,000 readers and half a million volumes. The building is centrally air-conditioned and heated and is fully carpeted throughout.

At the moment, with parts of the building used for non-library purposes, there are over 1,500 seats and shelving for 200,000 volumes. This seating capacity is inadequate near examination time, when students can be seen sitting on the floor or on staircases, but is sufficient for the rest of the year. With a compact campus area the polytechnic does not have departmental or faculty libraries—all library materials and services are housed in the single centrally situated building.

Included in the polytechnic library building is an Education Technology Unit, which is independently administered but nevertheless works closely with the library, providing equipment and services to groups of staff and students while the library's non-print section deals with the needs of staff and students on an individual basis. The non-print area contains 42 carrels equipped with a range of audio-visual hardware.

Automation of library procedures is likely to move ahead rapidly at the University of Hongkong library which is installing a DEC PDP 11/70 mini-computer. With terminal linkage to both the polytechnic and the Chinese University, this computer will hold machine readable catalogue (MARC) records.

A working group comprising staff from the libraries and the computer centres of each institution has been formed to develop systems so that the MARC base can be used by all three partners for cataloguing purposes. In addition to cataloguing, the University of Hongkong will use its computer to automate circulation routines and book ordering procedures.

The polytechnic's library catalogues have been in book form using direct computer print-outs since 1975. However, the availability of MARC records is expected to improve the speed and efficiency of the polytechnic's cataloguing processes. Automation of the polytechnic's circulation and ordering systems on one of its computer centre PDP 11/70s is expected by the end of next year.

A Universities and Polytechnic Joint Libraries Advisory Committee liaises on library administration and acts as an advisory body to the two vice-chancellors and the polytechnic director. One of the main activities of this committee is to rationalize the coverage of periodicals taken by the three libraries, attempting to avoid unnecessary duplication while at the same time increasing the number of titles available in Hongkong. The UPGC holds the view that, for some purposes, the libraries of the three institutions might be treated as a single unit.

The collections in each library are made available to the other libraries through a messenger service. Photocopies of periodical articles are exchanged free of charge between the three libraries. All three libraries make use of the British Library lending division to acquire periodical articles not available in Hongkong.

A major difference from traditional western practices is in the cataloguing of Chinese and Japanese materials. In Hongkong, it is generally accepted that romanization of Chinese and Japanese characters is neither practical nor economical since library users find it much easier to read the original script. This means that a separate catalogue is kept for Japanese and Chinese materials. The catalogue cards are interfiled according to the number of strokes in the character.

Theft of books and periodicals from libraries is a world-wide problem and, unfortunately, Hongkong is no exception. Since the opening of its new library building the Polytechnic has used the Tattle-Tape electronic security system to protect its collection. The University of Hongkong library is now introducing the same system.



Queuing for seats outside the polytechnic's library.

Barry Burton is chief librarian, the Hongkong polytechnic.

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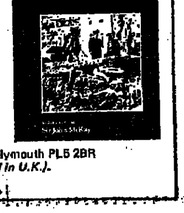
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Hongkong's University and Polytechnic Grants Committee is the Government's fifth largest spender

Umbrella body coordinates range of funding activities

Hongkong's University and Polytechnic Grants Committee is in many essentials modelled on its British counterpart. But it also differs from it in significant ways. Its name, for a start, indicates a range of responsibilities wider than the University Grants Committee in London.

The UPGC began life as a UGC in 1965 to act as an impartial judge of the claims of Hongkong's University and the then fledgling Chinese University. It became fully operational in 1967 and, in 1972, when the polytechnic was created, it took over this institution's funding as well and changed its name to reflect its new duties.

Deliberately, it has been kept modest in size by Mr S. F. (Bill) Bailey, the committee's secretary. Mr Bailey is a firm believer in small being beautiful—admistratively at least. The UPGC has a staff of 16, of whom only two are senior grade. Yet, with a total budget of HK$450m this year, it is the fifth biggest Government spender.

But if the scale is small, the committee is large on quality. Mr Bailey himself, a one-time colonial administrator in Kenya and for two years with the Science Research Council, keeps, by general consent, a genial, though close and efficient control over the developments of the three institutions.

Additionally, the committee itself is loaded with top names in British academic circles. Dr Edward Parkes, chairman of the UGC, is a member, as is the ubiquitous Lord Briggs, the Provost of Worcester College, Oxford. And the medical subcommittee is headed by Sir John Butterfield, the regius professor of physics at Cambridge.

In all there are 14 members of the committee; six are academics or administrators from Britain and two are from Australia. There are no academics from Hongkong because, with such a small academic community, there are understandable fears of either incestuous ganging-up or internecine warfare.

On the other hand, *all* the six non-academic members of the committee are Hongkong businessmen, reflecting the close links between industry and higher education in the territory. The chairman, for example, is tycoon Mr John Bremridge, the head of Swires, one of Hongkong's largest concerns.

Although the polytechnic could not, when it was set up, have been in any sense "local authority controlled" and therefore needed some more central method of financing, its integration into a university grants system was a pioneering act. And, in the Hongkong situation, it was a commonsense one, too.

Calculating the future profile of the polytechnic and its funding needs has been made difficult by its rapid expansion, a process which is still continuing. Another problem hampering budgeting has been the reluctance of employers to embrace part-time day-release schemes, something which the polytechnic is pushing for hard.

With nine applications for every place, it would be easy for the polytechnic to back up numbers with full-time students, but both it and the UPGC believe this would be to put a wrong emphasis on the work being done. Any expansion of full-time students at the expense of day-release people would be seen as undermining the importance of the industry-study tie-up.

Another key difference from the UGC is that the UPGC is directly in charge of student financing. Aid was introduced for most students in 1969 and the UPGC took it on board from the start.

The aid comes in a grant-loan package, with a maximum grant of HK$2,730 a year and a maximum loan of just over HK$5,000. The average grant is HK$1,600 and the average loan is HK$4,000. The loans are interest-free and repayable over five years after graduation.

When the scheme began the loan element was about 55 per cent of the total assistance. Now it has crept up to 77 per cent and this, says Mr Bailey, who wants to bring it down to under 60 per cent, is too high. Despite this, however, only four cases of loan defaulting are known to the UPGC; and at present 26,000 loans are being recovered.

Over the past four years the issues that have shaped UPGC decision-making have been the financial cutbacks of the first two years, the giddy expansion of the polytechnic, the preparatory work on the new dental school for [illegible] and the medical school for [illegible] the associated setting up of [illegible] medical facilities, and the rationalization of CU from a loose federation of three colleges into a more centralized body.

UPGC circles see the Chinese University, after the trials and tribulations of its birth, as now ready to enter a period of strong consolidation. But there remains concern that its undergraduate courses will last four years instead of the three at HKU.

The point is made that to give an extra year to the CU's secondary schools would cost HK$4m a year while each of his sons and, indeed, of Julian himself. Even in matters of religion—the sphere to which Julian's globe about his uncle was chiefly

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However this may be, it is expected that the coming White Paper will defer consideration of this issue for at least another triennium. Whether the Chinese University will be allowed to go ahead permanently with its plans for five-year medicine courses instead of the five at HKU is also likely to be deferred.

For the coming period, capital projects are looming large. Bids for the new dental and medical schools have already been allocated, but Hongkong University will be getting over HK$21m for buildings over the triennium, against HK$95m for the polytechnic and just over HK$6m for the Chinese University, which, with its Shatin campus already well developed, is less in need at present in this respect. "As you see, the money situation is not bad compared to the UGC situation" says Mr Bailey wryly.

HKU's recurrent grant for the triennium is HK$350m, CU's HK$255m and the polytechnic's HK$411m. The polytechnic is peculiarly hard hit in that it does not own any accommodation in which to house its expatriate and other senior staff. Consequently it has a lease: in 1977-78 this ate up as much as 12 per cent of its total expenditure as against 7.5 per cent at HKU and 3 per cent at CU.

P.M.

Learning's role as aid to free enterprise

cont. from page 1

home. There is, indeed, a very perceptible brain drain to Hongkong of highly qualified academics who are, in the words of one example, "fed up with fighting".

Added to the chance to get on with things comes something else that is missing for most United Kingdom academics: excellent salaries and conditions.

It is not just the pay cheques which cheer, although with professors on a minimum of over £14,000 (usually, in practice, of course, much more than this) and lecturers and senior lecturers earning up to £12,000, these are by no means negligible.

Just as important are the perks: accommodation at around 7.5 per cent of salary, income tax often averaging out at about 10 per cent, generous assistance with school fees and most medical expenses and, at the end of every contract, usually two years, a bonus of 25 per cent of all that has been earned over the contract period.

Perhaps the most controversial issue currently facing the higher education community is whether the polytechnic should be given degree-awarding status.

It is a question which has split policy-makers and sharply divided the institution's board of governors. At present full-time students at the polytechnic can get Diplomas, Higher Diplomas or Associateships, the last-named being regarded by many as equivalent to a first degree.

It is felt in some quarters that to initiate degree programmes will divert the energies of the polytechnic from the main business in hand.

Familiar arguments are rehearsed: the best students would all want to go for degrees and study at levels not needed by the community, all those not doing degree work would feel second-rate and, however many promises were made about limiting degree work it would, once under way, like Topsy just grow and grow.

The decision will be taken in the White Paper. At the time of writing the Government still appears undecided. Private opinions of senior educational administrators range from "no chance" to "certain".

According to the Green Paper figures, about 3 per cent of Hongkong's population is working at technologist level or equivalent as against 9 per cent at technician level and 26 per cent at craft level. No fewer than 62 per cent are employed in operative or unskilled work.

There appears, in other words, little need for a new source of graduate manpower. However, the Green Paper does make the point that "the Government considers its efforts to attract new technologically-based industries will lead to a growth in the availability of skilled jobs".

Perhaps the most realistic guess, therefore, as far as the polytechnic's courses are concerned, is that the go-ahead will be given for up to 20 per cent degree work from 1981.

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BOOKS

A period of religious transition

The Age of Constantine and Julian
by Diana Bowder
Elek, £12.50
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The Emperor Julian is the first person recorded to have charged Constantine, his uncle, with being a revolutionary: "The innovator, subverter of ancient laws and traditions received of old." The half-century between Constantine gaining control of the western provinces of the empire (312) and Julian's death is, however, a much more complex period in Roman history than Julian's judgment would suggest.

A blend of conservatism and restoration with reform and innovation is characteristic of Constantine's policies, just as it is of those of his sons and, indeed, of Julian himself. Even in matters of religion—the sphere to which Julian's globe about his uncle was chiefly intended to refer—the period remained one of transition. During all this time, and for another generation, "paganism" remained alive and, in some of its forms, flourished and underwent revivals while Christianity, the religion of Constantine and his sons, became increasingly important and influential in public life and in Roman society at large.

Dr Bowder has set out to map this period of the coexistence of the old and the new during the half-century which saw a decisive shift in the balance between them. The principal aim of the book appears to be to describe the culture of a society in which the old pagan religions and the Christianity of the imperial family, and increasingly, of the educated classes and officialdom flourished side by side.

There is need for more caution than the author shows in writing of "paganism" as if it were a coherent religious phenomenon such as Christianity was. If "paganism" meant anything in the fourth century, it was simply all the religions of non-Christians lumped together by their opponents; "pagan *curiae* in the East and Africa . . . pagan lords in Rome, and . . . a mostly pagan population in the north-west" (page 96) cannot be assumed to have much in common beyond the tenacity of their opposition to Christianity and its undiscriminating dislike. It is too easy for modern historians to see fourth-century pagans through the undifferentiating eyes of its deserters: Dr Bowder has not consistently avoided this danger. The contrast alleged between a "state-orientated" and a "truly religious" cult (page 152) similarly, is one that a twentieth-century historian finds much easier to define than would a fourth-century emperor or his subjects—pagan or Christian.

As a whole, however, this is a useful and informative account of a period for which English readers, while they have excellent accounts of Constantine and (now) of Julian, still lack a unified presentation such as Piganiol gave to the French. An introductory chapter is devoted to Constantine's predecessor, Diocletian, and his measures designed to deal with the political, social and economic problems bequeathed by the crises of the third century. Then comes a fairly detailed narrative of the political history of the empire from Constantine to Julian, followed by chapters on imperial church foundations and buildings, official policies towards paganism, Christianity, heresy and schism, and to Julian's attempt to rally the forces of pagan "Hellenism".

The long final chapter on Christian and pagan life and art is a fine study of a wide range of artefacts of the period in the context of their use. The selection of the works discussed is dictated by the author's strong sense of a society whose culture and religion are very much in transition. The juxtaposition of pagan and Christian in this society, their coexistence, often astonishingly close (of which several telling examples are to be found in the book), and the ambiguities which were generated are well, sometimes dramatically, brought out. It is a pity Dr Bowder has left the literary activity of the period in the background: it could have furnished illustrations no less dramatic of a culture both conservative and uncertain of its bearings as do its buildings, mosaics, its funerary art and tableware.

Fifty-one well-chosen illustrations, many of them unusual, help to illuminate the text (or, rather, would help if the plates had not been jumbled up by the binder, as they have been in my copy—so as to make the task of relating illustrations to their captions daunting for the uninitiated).

R. A. Markus

A master and a menace

Philip of Macedon
by George Cawkwell
Faber, £7.50
ISBN 0 571 10958 6

Cawkwell provides a racy account with Thucydidean concentration and economy, stripped of scholarly detritus, wickedly spiced with Tacitean aphorisms and resting on the Thucydidean tenet that it is natural for men to extend their control over others.

Not for Cawkwell the grand old themes written in the grand style: Philip is not the hero who for Droysen led the warring Greeks to peace and unity nor is he the greedy and crazed autocrat who always had one more demand to *make in* his territorial progress; nor is his arch-opponent, the Athenian Demosthenes, the idealized champion of liberty who appealed to liberal politicians such as Grote in the nineteenth century or to the diplomat Clemenceau in this one is Demosthenes the author of those wise and far-sighted policies detected by Richard Cambridge amid the lies and half-truths which masked them.

Cawkwell has an insistent theme: Philip was a great man—and a great menace. The Greeks, who had drifted in exhaustion through transient hegemonies, were robbed by him of their most precious commodity—their liberty. The world of the city-states was unable to counter the suddenly acquired cohesion of the nation-state by whose creation Philip had suddenly propelled Macedon out of its Homeric past and its melancholy condition. Demosthenes was not the noble tragic hero who strove in vain to galvanize corrupt and unpatriotic citizens into resistance. If he was a tragic hero then the tragedy was of his own making. If when the final confrontation came in 338 BC at the Battle of Chaeronea (dubbed by Milton as fatal to liberty) the outcome refuted his policies, then that was deservedly so, for his policies were wrong and he was incompetent. The first of the *Philippics*, Demosthenes's contribution to our literary and political vocabulary, was indeed "greatly wrong-headed" and over Phocis Demosthenes "made a fool of himself".

Philip was a master of statecraft and statesmanship, a master tactician who efficiently disposed of pretenders and dealt piecemeal with external opponents. He made his dispositions with the purpose of a Bismarck, Frederick the Great and Machiavelli, through policy, diplomacy and force—not through wholesale bribery and corruption as the Greek and Roman orators pretended, for he did not have the gold of a Persian king. Polybius, who credited all those alleged traitors with honesty and patriotism, was a lone voice in the Ancient World.

If Philip was bent on revenge for the advantage which the old Greek powers of Athens, Sparta, Corinth and Thebes had habitually taken of Macedon, there was much to revenge. Philip, however, unlike his son Alexander the Great, knew both how to fight and when to stop and was given to considered strategy rather than reckless tactics. As early as 347 BC he had designs on Persia and tempered his conduct towards Athens, Phocis and later Byzantium accordingly. He knew how not to throw away the peace and obtained the compliance of the Greeks, content with the corruption of their powerlessness, with his leadership of his and their long-sought crusade against the barbarians of Asia.

Only one state which did have the choice opposed him creditably: the "swinish, clog-wearing" Boeotians were the real heroes of Greece. But the Greeks could not match in opposition the achievement of one of Philip's own countrymen. In 336 BC Philip was assassinated by a drunken Macedonian. He had been king for half of his 46 years.

D. J. Mosley

Cicero and political power

Cicero and the End of the Roman Republic
by W. K. Lacey
Hodder and Stoughton £4.95
ISBN 0 340 05937 0

"Fame, not power or wealth", writes Professor Lacey in his preface to this the fourth biography of Cicero to roll off the printing presses of England in the past seven years, "was the limit of Cicero's ambitions".

If that were true, it is evident that his shade would rest well content. Leaving aside all the books that have been written about him or in which he bulks large, and the numberless editions of his works and commentaries on them, Cicero is a member of that small and select company of great men of classical antiquity whose names can still strike a chord of recognition in millions of people alive today—indeed, even Her Majesty's favourite parade horse and the most famous Nazi spy of the last war are called "Cicero".

Yet, for all that, I persist in the conviction that Cicero's chief ambition was not fame (and certainly not posthumous fame—he was far too sensible to allow that to outweigh all else) but power, the power to influence and direct the course of events in his own lifetime. His speeches in the law courts and in the Senate and to the Roman people helped build up that power, and were often the instruments by which it was deployed; but his other literary and philosophical writings, for all their immense interest and importance for the history of the intellectual life of Europe, always for him took second place to politics and were pursued in the odds and ends of time left over from his public activities or as a means of occupying his mind and his energies in periods of enforced absence from the political centre stage.

His own lifetime spanned the period of the death-throes of the Republic: born in the same year as Pompey the Great, he died 18 months after Julius Caesar was assassinated, and in his maturity he was always one of the men who really mattered. The most forceful, effective, and polished speaker of his time, and perhaps of all time, he could be an invaluable ally or a dangerous opponent. Charming and witty, indefatigably efficient as a lawyer and administrator, cultivated and civilized, a sensitive, imaginative, and basically decent and likeable man, he worked for the preservation of the *libera res publica* which he loved with all his heart, and for which in the end he sacrificed his own life, with an innate optimism and obullient self-confidence which could occasionally, but usually only briefly, be clouded over by moods of deep disillusion and bleak despair. Above all, he is the only figure of ancient Greece and Rome whom we can see fully in the round, thanks not only to his many speeches and essays and treatises which have survived, but above all to the rich treasure of nearly 1,000 letters from him to his friends and from his friends to him, which shed a flood of light not only on him but on his age, most of them written as we write our own letters, without thought for publication or literary immortality and serving, like the offerings that Odysseus made to the twittering ghosts of Hades, to clothe the dead again in flesh and bones and blood.

Material enough for any number of books. But this book, I regret to say, promises only to disappoint. Despite its title, it has little to say about the underlying reasons why the Roman Republic ended, and how Cicero's own life was intermeshed with that ending. Despite its author's avowed purpose, its attention to the large question of Cicero's literary achievement and importance is cursory and run-of-the-mill. It is evidently meant for the general reader (there are no footnotes and no references), but has nothing new to say and too little room in which to say it. Which is a great pity.

Lacey is a fine and imaginative and fresh-minded scholar, as his other published work amply demonstrates. But here, I suspect, the narrow limits of space and object have served to mask those qualities.

D. L. Stockton

Reviewers

David McLellan is professor of political theory at Kent University and author of Marx Before Marxism;

R. A. Markus is professor of medieval history at Nottingham University and his books include Christianity in the Roman World;

D. J. Mosley is professor of ancient history and classical archaeology at Sheffield University;

Patrick Parrinder lectures in English at Reading University;

John Preston is professor of English at Warwick University and author of The Created Self;

Geoffrey Shepherd is professor of medieval English at Birmingham University;

D. L. Stockton lectures in ancient history at Oxford.

Roman disorder

A new edition of P. A. Brunt's *Social Conflicts in the Roman Republic* has been published by Chatto & Windus at £2.50. The book looks at social unrest throughout the history of the Republic and particularly at the discontents of the urban and rural poor as a factor contributing to the Republic's fall. Brunt suggests that the poor gained relatively little benefit from the monarchic system they helped to found. The new edition contains substantial revisions which take account of advances in scholarship which have taken place since the book's original publication in 1971.

IMPORTANT NEW TEXT BOOKS

Macroeconomic Theory G. Ackley (Michigan University)

Dr. Ackley, former Chairman of President Ford's Council of Economic Advisors, presents a four-part analysis of Keynesian and post-Keynesian macroeconomics. Discussion is centered around problems of unemployment, economic instability, inflation and economic growth.

Contents: Concepts and Measurement, Classical Macroeconomics, The Simple Keynesian Model, The Keynesian Classical Synthesis, Inflation, Consumer Spending, Investment, Financial Assets, Interest Rates and Monetary Policy.

02 360203 3 Hdbk 597 pages £11.95 02 976448 9 Ppr £6.50

Macroeconomics: Cycles, Growth and Policy in a Monetary Economy J. Bearo (York University, Toronto)

An intermediate text for undergraduates with some knowledge of calculus. Leaning towards the monetarist approach, this up-to-date work begins with a discussion of labour economics and contains an analytic treatment of monetary/fiscal policy. With an excellent coverage of growth theory, value and inflation, this text presents both the unity and the diversity of current macroeconomic thought.

Contents: Aggregate Supply, The Labour Market, Aggregate Demand, The Demand for Money, The Supply of Money, Models of Economic Cycles, Inflation, An Open Economy Model, Monetary and Fiscal Policy in a Cyclical Context, Theory of Stabilization Policy, Economic Growth, Monetary and Fiscal Policy in a Growth Context.

02 307710 7 Hdbk 512 pages £12.75 02 825103 3 Ppr £6.95

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BRITISH ELECTIONS:
MYTH AND REALITY
Geoffrey Alderman

£3.25 *paper* 0 7134 0196 6 £6.95 0 7134 0195 8

230 pages

This book highlights the sharp differences between what is supposed to take place in parliamentary elections and what really does take place. It questions the assumptions about who the voters are, who they vote for and about the influence of the media and public opinion polls; it looks at the voting alignments by sex, age, religion and region. Ideal reading for students and for all critically interested in contemporary British politics.

Geoffrey Alderman is a lecturer in the Department of History, Royal Holloway College, University of London.

Batsford Academic
4 Fitzhardinge Street, London W1H 0AH.

NOTICE BOARD

Chairs

Dr Peter Weitzman, senior lecturer in biochemistry at the University of Leicester, has been appointed to the chair of biochemistry at the University of Bath from January 1, 1979.

Dr Marten D. Shipman, director of research and statistics with the Inner London Education Authority, has been appointed to the chair of education at the University of Warwick.

Mr D. L. Munden, senior lecturer in the department of textile industries at Leeds University, has been appointed to the new chair of textile technology and headship of the School of Textile and Knitwear Technology at the Leicester Polytechnic.

Recent publications

Joining a study tour for gourmets in the Auvergne, polishing up your Polish in Warsaw, or studying recent advances in the physics of disordered systems in the Haute Savoie are activities described in *Study Holidays 1978-79*, published by the Central Bureau for Educational Visits and Exchanges. Available from the Central Bureau at 43 Dorset Street, London W1H 3FN, or at most branches of W. H. Smith, 85p.

Appointments

Birmingham

Faculty of Law
Senior lecturer: B. Perrins. Lecturer: J. McBride.
Faculty of Education
Senior lecturer: Dr J. M. Hull (history and philosophy of education). Lecturer: D. I. Lloyd (history and philosophy of education). Visiting Priorsfield fellow: Clare G. Fothergill (educational psychology).
Department of biochemistry
Senior lecturer—promotion: Dr N. J. Kuhn. Research fellow: Rosemary J. S. Jones.
Computer Centre
Lecturer: W. P. Dodd (academic division). Computer Officers: C. Amos, D. Henry, M. A. Horder and P. Mather (service division).
Centre for Russian and East European Studies
Research fellow: J. N. Westwood.
University Library
Sub-librarian—promotion: B. S. Benedikz. Assistant librarian: R. A. Hamilton (National Documentation Centre for Sport, Physical Education and Recreation).
Health Services Management Centre
Research associate: Lorna P. Vickerstaff.

Leicester
Associate Pro-Vice-Chancellor: Professor H. Arthur Jones.

Oxford
John Locke lecturer in philosophy: David B. Kaplan.

Grants

Birmingham
Physics—Professor D. C. Colley—£49,300 from the SRC for tape and disc upgrade for film analysis 370/145 computer. Dr G. R. Isaak and Dr H. B. van der Raay—£49,379 from the SRC for applications of optical resonance scattering to solar physics.
Microbiology—£33,008 from the Wellcome Trust to Professor H. Smith for a study of the determinants of pathogenicity of the treponemes.
Immunology—Dr R. Jefferis and Dr D. Catty—£28,611 from the MRC for research on the control of immunoglobin synthesis in B cells, using allotype suppression in the rabbit as a model.
Biochemistry—Professor D. G. Walker—£17,422 from the British Diabetic Association for a study of interaction of diet, insulin and genetic factors in the regulation of hepatic glucokinase in inbred mouse strains.
Transportation and environmental planning—Professor H. Kolbuszewski—£172,925 from a United Kingdom cooperative accident investigation project.
Industrial Metallurgy—Dr D. R. Milner—£12,272 from the Truth Research Foundation Ltd for an investigation of energy force fields associated with materials.
Mechanical engineering Dr C. J. Hooke £10,993 from the Ministry of Defence for a study of MS propulsion of slow speed motors.

Kent
Sociology—£15,300 from the SSRC to finance a study of the origins and growth of small-scale business enterprises under the direction of R. G.

Leeds
Computer studies—£10,790 from the SRC for a project on "The algebraic specification of data types" under the direction of M. B. Smith.
Chemistry—£33,900 from the SRC for a project on development of the theory and applications of NMR Spin-echo experiments in solids under the direction of Dr N. Boden.

Forthcoming events

The International Scientific Association is to hold its 32nd congress and festival in the Al Alhram Building in Cairo from September 24-30. Information from Miss Dora Thomas, chairman, scientific film association, PAF/1 Shell Centre, London SE1 7NA.

* * *

The Association for the Study of Medical Education is to hold its two day annual meeting at the Royal Free Hospital, London from September 28-29. The first session on basic medical sciences learning and teaching will include discussions on "A student's view of the teaching of basic medical sciences", "Case for separation of clinical and pre-clinical studies" and "Helping students to Learn". Further details from the ASME Office, 150b Perth Road, Dundee DD1 4EA.

* * *

A three day course on interactive computer graphics for engineers is to be held from September 25-27 at Leicester University. Its aim is to introduce already experienced engineers to some display interactive and data structuring techniques at the Fortran level which makes possible the exploitation of low cost graphics terminal equipment. Further details from the Computer Graphics Course Secretary, Department of Engineering, Leicester University LE1 7RH.

* * *

A course for new staff to be held at the University of Exeter from September 25-29 will be open to staff from other institutions. It is particularly suitable for teachers in arts, law and social sciences, including tutors and foreign assistants. Further information from Donald Bligh, director of teaching services, Exeter University, Streatham Court, Rennes Drive, Exeter.

* * *

A course on advertising control under United Kingdom and European Community law and practice is to be held from September 28-29 at Gresham College, City University. It will review the present and proposed methods of legal and voluntary control, their impact on advertising agencies and their relationship to the effective of fair business competition and the public interest. Fee: £130. Details from Pam Harrison, City University Business School, Gresham College, Basinghall Street, London EC2V 5AH.

Open University programmes September 9 to 15

Saturday September 9

BBC 2
7.40 Twentieth century poetry: Miroslav Holub (A306; prog 16).
8.05 Technology foundation course: Statistics and Reliability (T100; prog 10).
8.30* Arts foundation course: Matters of Interpretation (A101; prog 28).
8.55* Urban development: Warsaw: A Socialist City Programme 2: Housing (DT201; prog 14).
9.20* Fundamentals of statistical inference: Linear Models (M341; prog 7).
9.45 Modelling by mathematics: Braking for safety (TM281; prog 9).
10.10 The digital computer: River Measurement (TM221; prog 11).
10.35* Materials under stress: The Turbine Blade (1) Different Blade, Different Alloy, Different Process (T351; prog 13).
11.00* Ecology: Indicator Species (S323; prog 14).
11.25* The nature of chemistry: Thallium in Organic Synthesis (S301; prog 20).
11.50* Economics and education policy: Investing in your Children's Future (ED322; prog 8).
12.15 Drama: "Waiting for Godot" (A307; prog 14).
13.05* History of architecture and design 1890-1939: The Other Tradition (A305; prog 21).
13.30* Numerical computation: Random sampling (M351; prog 7).

RADIO 3 (VHF)
6.00 Integration and normed spaces: A Review of the Course (M332; prog 8).
6.20 People and organisations: Conclusion (DT352; prog 8).
6.40 The age of revolutions: David and the Cult of Antiquity (A202; prog 20).
7.00 Technology foundation course: The Reliability of Vehicles (T100; prog 22).
7.20* Arts foundation course: Mill the Reformer (A101; prog 28).
7.40* Complex analysis: Laplace Transformations (M332; prog 7).

RADIO 4 (VHF)
Not on north Scottish and Welsh transmitters
9.05 Open Forum—30.
9.20 Man's religious quest: Inter-Religious Dialogue (AD208; prog 32).
9.40* Oceanography: Deep Sea Sediments (S334; prog 7).
10.00 Language and learning: Revision (E262; prog 14).
10.20 Comparative government and politics: Radio Tutorial (TMA 5) (D231; prog 7).
10.40 Elements of music: Antecedent and Consequent (A241; prog 14).
11.00* Social psychology: Applied Research in Social Psychology (D305; prog 15).
11.20* The development of instruments and their music: The Later Music of Pierre Boulez (A304; prog 14).
11.40* Twentieth century poetry: Philip Larkin (A306; prog 14).
14.00 Renaissance and reformation: Popular Poetry in the Elizabethan Period—The Traditional Ballads (A201; prog 29).
14.20 An introduction to materials: Concorde: External Factors (TS251; prog 8).
14.40* Personality and learning: Case Study of a Slow Learner (E201; prog 28).
15.00 Patterns of inequality: Servant of the State? (D302; prog 29).
15.20* Curriculum design and development: The Science Teachers (E203; prog 21).
15.40* Environmental control and public health: Air pollution and the Public Health Inspectorate (PT272; prog 14).
16.00* Genetics: Lysenko (S299; prog 13).
16.20 Technology for teachers: Examining School Technology (PET271; prog 4).
16.40* Control of technology: Comtek (T361; prog 7).

RADIO 3 (VHF)
Alternative broadcasts for north Scottish and Welsh transmitters
24.00* Language and learning: Revision (E260; prog 14).
00.20* Oceanography: Deep Sea Sediments (S334; prog 7).
00.40* Man's religious quest: Inter-Religious Dialogue (AD208; prog 32).

Sunday September 10

BBC 2
7.40 Making sense of society: Transport and Road Research Laboratory (D101; prog 29).
8.05 Science foundation course: Quantum Theory (S100; prog 29).
8.30 Mathematics foundation course: Modelling Cranes (M101; prog 24).
8.55 Instrumentation: Display and Recording (T291; prog 10).
9.20 An algorithmic approach to computing: Compiling (M251; prog 11).
9.45 Elementary mathematics for science and technology: Two-Ports (MST281; prog 16).
10.10 Topics in pure mathematics: pi (X, X) (M202; prog 29).
11.20 Modern art from 1848 to the present: styles and social implications: Art as Performance (A351; prog 10).
12.15 Science and belief: from Copernicus to Darwin: The Origin of the Origin of the Species (AMST283; prog 10).
12.40 The revolutions of 1848: The Gospel of Work: Britain after 1848 (A321; prog 10).
13.05 Education, economy and politics: The Case of William Tyndale (E352; prog 7).
13.30 Microeconomics: The Channel Tunnel (D323; prog 8).

RADIO 3 (VHF)
6.00* Renaissance and reformation: Popular Poetry in the Elizabethan Period—The Traditional Ballads (A201; prog 29).
6.20* Biochemistry and molecular biology: Antibody Function (S322; prog 14).
6.40* Environmental control and public health: Air Pollution and the Public Health Inspectorate (PT272; prog 14).
7.00 Making sense of society: Social Science and Social Change (1) (D101; prog 29).
7.20 Science foundation course: Planck and the Quantum Theory (S100; prog 27).
7.45* Open Forum—30.

RADIO 4 (VHF)
0.10 War and society: Non-Violence as Political Action (A301; prog 14).
0.35 International politics and foreign policy: Interstate or World Society? (D332; prog 12).
9.50 Problems of philosophy: Liberty: An Imaginary Conversation between Voltaire and Rousseau (A303; prog 15).
10.15 Science and the rise of technology since 1800: From Dyes to Drugs (AST281; prog 10).

RADIO 3 (VHF)
24.00* History of architecture and design 1890-1939: The M.A.R.S. Group and the Thirties (A305; prog 21).
00.20 Drama: Collective Drama: Joint Stock and Mike Leigh (A307; prog 15).
00.40 Modern art from 1848 to the present: styles and social implications: The Impact of Abstract Expressionism (A351; prog 10).

Monday September 11

BBC 1
6.40 Cognitive psychology: Production systems (D303; prog 14).
7.05 Personality and learning: Diagnosis of Learning Problems (E201; prog 15).
7.30* Modern art from 1848 to the present: styles and social implications: Art as Performance (A351; prog 10).

BBC 2
6.40 Systems behaviour: A Biological System—Respiration (T241; prog 13).
7.05 The Earth's physical resources: Water Resources: A Case Study (S266; prog 10).
7.30 Physiology of cells and organisms: Circadian Rhythms (1) (S321; prog 15).
16.55* Twentieth-century poetry: Miroslav Holub (A306; prog 15).
17.20 Geophysics: The Formation of Oceanic Crust (S2-4; prog 4).
17.45 Linear mathematics: Laplace Transforms (M201; prog 29).
18.10* Mathematics foundation course: Modelling Cranes (M101; prog 24).
18.35* Technology foundation course: Statistics and reliability (T100; prog 10).

RADIO 3 (VHF)
6.00 Telecommunication systems: The Specimen Exam Paper (T321; prog 7).
6.20 Images and information: Focal Imaging (ST291; prog 7).
6.40* Man's religious quest: Inter-Religious Dialogue (AD208; prog 32).
17.45* People and organizations: Conclusion (DT352; prog 8).
18.05 National income and economic policy: The Case for Incomes Policy (D283; prog 15).
18.25 Linear mathematics: Revision (M201; prog 15).
18.45 Regional analysis and development: A Discussion with Regional Tutors (D342; prog 11).
19.05 O.U. Announcements/Music Fill.
19.10* Making sense of society: Social Science and Social Change (1) (D101; prog 29).

Alternative broadcasts for north Scottish and Welsh transmitters
24.00* An introduction to materials: Concorde: External Factors (TS251; prog 8).
00.20* The development of instruments and their music: The Later Music of Pierre Boulez (A304; prog 14).
00.40* Elements of music: Antecedent and Consequent (A241; prog 14).

Tuesday September 12

BBC 1
6.40 The development of instruments and their music: "Kontakte" (A304; prog 14).
7.05 Social psychology: Members of the Jury (D305; prog 14).
7.30 Solids, liquids and gases: The Joule-Kelvin Effect (ST285; prog 14).

BBC 2
6.40 Integration and normed spaces: Integration and Normed Spaces (M331; prog 8).
7.05 Biological bases of behaviour: Social Behaviour of Animals (SDT286; prog 16).
7.30 Education and the urban environment: Waltham Forest: A Rejecting Society? (E361; prog 7).
16.55 An introduction to psychology: Computers and Thinking (DS261; prog 10).
17.20 Patterns of inequality: Cuba: The Revolutionary Alternative (D302; prog 16).
18.10 Renaissance and reformation: "Gloriana" (A201; prog 18).
18.35* Science foundation course: Quantum Theory (S100; prog 29).

RADIO 3 (VHF)
6.00 Earth science topics and methods: Lunar Geochronology (S333; prog 10).
6.20* Language and learning: Revision (E262; prog 14).
6.40* Comparative government and politics: Radio Tutorial (TMA 5) (D231; prog 7).
17.45* The nature of chemistry: The Development of Oral Contraceptives (S304; prog 13).
18.05 People and work: Management Consultants (DE351; prog 15).
18.25 Art and environment: Being Realistic About the Future (TAD292; prog 8).
18.45 Elementary mathematics for science and technology: Properties of Differential Equations (MST281; prog 8).
19.05 OU Announcements/Music Fill.
19.10 Arts foundation course: The Gospel of Work (A101; prog 29).

Alternative broadcasts for north Scottish and Welsh transmitters
24.00* Personality and learning: Case Study of a Slow Learner (E201; prog 28).
00.20* Renaissance and reformation: Popular Poetry in the Elizabethan Period—The Traditional Ballads (A201; prog 29).
00.40* Social psychology: Applied Research in Social Psychology (D305; prog 15).

Wednesday September 13

BBC 1
6.40 Reading development: Resource Development (PE231; prog 8).
7.05* Linear mathematics: Laplace Transforms (M201; prog 29).
7.30 The handicapped person in the community: Working Together (PD251; prog 10).

BBC 2
6.40 An introduction to materials: The Transformer Core (TS251; prog 11).
7.05 The nature of chemistry: The Curious History of Norethindrone (S304; prog 26).
7.30 Elements of music: Formal Analysis (A241; prog 7).
16.55* Personality and learning: Diagnosis of Learning Problems (E201; prog 15).
17.20* Earth science topics and methods: Cratering and Lunar Geology (S333; prog 11).
17.45* Solids, liquids and gases: The Joule-Kelvin Effect (ST285; prog 14).
18.10* Biochemistry and molecular biology: The Antibody Molecule (S322; prog 14).
18.35 Arts foundation course: A Golden Age of Work (A101; prog 29).

RADIO 3 (VHF)
6.00 International politics and foreign policy: Interstate or World Society? (D332; prog 12).
6.20 Technology for teachers: Examining School Technology (PET271; prog 4).
6.40 The nineteenth-century novel and its legacy: New Directions in the Novel (A302; prog 15).
17.45 Urban development: Socialist Urban Society (DT201; prog 21).
18.05 Education, economy and politics: Reflections on the Case of William Tyndale: Part 1 (E352; prog 9).
18.25 Decision making in Britain: Britain and the Third World (D203; prog 28).
18.45 The Earth's physical resources: The Energy Budget (S266; prog 4).
19.05 OU Announcements/Music Fill.
19.10 Mathematics foundation course: Foundation Maths 15 (M101; prog 15).

Alternative broadcasts for north Scottish and Welsh transmitters
24.00* Images and information: Focal Imaging (ST291; prog 7).
00.20* Curriculum design and development: The Science Teachers (E203; prog 21).
00.40* Patterns of inequality: Servant of the State? (D302; prog 29).

Thursday September 14

BBC1
6.40 Principles of chemical processes: Catalysis (ST294; prog 14).
7.05 Biochemistry: Radio Isotope Techniques (S2-1; prog 4).
7.30 Oceanography: Whales and Whaling (S334; prog 10).

BBC2
6.40* Drama: "Waiting for Godot" (A307; prog 14).
7.30* An introduction to psychology: Computers and Thinking (DS261; prog 10).
16.55* The Earth's physical resources: Water Resources: A Case Study (S266; prog 10).
17.20* The handicapped person in the community: Working Together (PD251; prog 10).
17.45* The development of instruments and their music: "Kontakte" (A304; prog 14).
18.10* Reading development: Resource Development (PE231; prog 8).
18.35* Making sense of society: Transport and Road Research Laboratory (D101; prog 29).

RADIO 3 (VHF)
6.00* Elements of music: Antecedent and Consequent (A241; prog 14).
6.20 Mass communication and society: James Bond: Occupation and Ideology (DE353; prog 16).
6.40 Personality and learning: Dinsdale Park School (E201; prog 29).
17.45* Integration and normed spaces: A Review of the Course (M332; prog 8).
18.05* People and work: Management Consultants (DE351; prog 15).
18.25* An introduction to materials: Concorde: External Factors (TS251; prog 8).
18.45* Problems of philosophy... (prog 7).

Alternative broadcasts for north Scottish and Welsh transmitters
24.00 Decision making in British education systems: "Caught in the Net" (E221; prog 10).
00.20* Technology for teachers: Examining School Technology (PET271; prog 4).
00.40* Telecommunication systems: The Specimen Exam Paper (T321; prog 7).

Friday September 15

BBC 1
6.40* Renaissance and reformation: "Gloriana" (A201; prog 18).
7.05* Geophysics: The Formation of Oceanic Crust (S2-4; prog 4).
7.30* Biochemistry and molecular biology: Antibody Genetics and Immunization (S322; prog 15).

BBC 2
6.40 Telecommunication systems: Colour Television 3 (T321; prog 8).
7.05* Patterns of inequality: Cuba: The Revolutionary Alternative (D302; prog 13).
16.55* Social psychology: Members of the Jury (D305; prog 14).
17.20* Biochemistry: Radio Isotope Techniques (S2-1; prog 4).
17.45* Systems behaviour: A Biological System—Respiration (T241; prog 13).
18.10* Biological bases of behaviour: Social Behaviour of Animals (SDT286; prog 16).

RADIO 3 (VHF)
6.00 Soviet government and politics: Soviet Foreign Policy (D333; prog 8).
6.20* Patterns of inequality: Servant of the State (D302; prog 29).
6.40* Drama: Collective Drama: Joint Stock and Mike Leigh (A307; prog 15).
17.45* The age of revolutions: David and the Cult of Antiquity (A202; prog 20).
18.05 Public administration: Incomes Policy Justified (D331; prog 13).
18.25 History of architecture and design 1890-1939: The Reform of the Skyscraper (A305; prog 20).
18.45 Numerical computation: The Strand Language (M351; prog 8).
19.05* Science foundation course: Planck and the Quantum Theory (S100; prog 29).

Alternative broadcasts for north Scottish and Welsh transmitters
24.00* The nineteenth century novel and its legacy: New Directions in the Novel (A302; prog 15).
0020* Comparative government and politics: Radio Tutorial (TMA 5) (D231; prog 7).
00.40* Open Forum 30.

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Colleges of Education
Colleges of Further Education
Colleges and Institutes of Higher Education
Colleges and Departments of Art
Research Posts
Administration
Overseas
Adult Education
Librarians
General Vacancies
Official Appointments
Appointments wanted
Other classifications
Awards
Announcements
Exhibitions
Personal
Courses
Holidays and Accommodation

AUSTRALIA

Applications are invited for the following posts, for which applications close on the dates shown. SALARIES (unless otherwise stated) are as follows: Professor $A31,789; Senior Research Fellow $A21,201-$A25,259; Research Fellow $A15,179-$A19,813; Senior Lecturer $A20,365-$A23,737; Lecturer $A15,179-$A19,940; Tutor $A10,788-$A12,702. Further details, conditions of appointment for each post, method of application and application form, where applicable, may be obtained from the Association of Commonwealth Universities (Appts.), 36 Gordon Square, London WC1H 0PF.

La Trobe University Melbourne
LECTURER IN PSYCHOLOGY
(Re-advertisement)
The appointee will engage in lecturing to undergraduate students, research supervision of both postgraduates and undergraduate students, and planning of curriculum. Preference will be given to applicants with a higher degree with research and undergraduate and graduate teaching experience in experimental social behaviour and/or philosophy and methodology of psychology.
The successful applicant may be appointed to either a fixed term or a tenurable position depending upon experience and qualifications.
21 September 1978

Macquarie University Sydney
SENIOR LECTURER/ LECTURER IN PHYSICS
SCHOOL OF MATHEMATICS AND PHYSICS
Applicants should have academic qualifications in physics or engineering and experience in both teaching and research. As a large part of the teaching is in the earlier years of physics and undergraduate courses and in general education courses in physics, demonstrable ability in teaching physics through lectures, tutorials and laboratory sessions in these areas is desirable. The research interests of the candidate will be taken into consideration in making an appointment and there is no specific restriction on the field of research. However the present experimental facilities in physics lie mainly in the areas of biophysics, laser physics, materials science, including the physics of macromolecules and semiconductors, electronics, and applications of data collected from satellites. Other research which can be carried out within the School or in co-operation with other Schools will be considered appropriate.
20 October 1978

SENIOR LECTURER/ LECTURER IN ENVIRONMENTAL STUDIES
CENTRE FOR ENVIRONMENTAL STUDIES
The Centre mainly teaches postgraduate students and courses cover the biological, physical and social aspects of the environment. Preference will be given to candidates with strengths in one of the latter two areas, and with postgraduate teaching experience in environmental studies.
20 October, 1978.

University of Melbourne
LECTURERS (LIMITED TENURE OR CONTINUING) DEPARTMENT OF TOWN AND REGIONAL PLANNING
Position number 1-705 022
This position involves the teaching of undergraduate and postgraduate courses in the area of housing policy and residential layout and statutory planning practice and procedures.
Position number F705 027 This position involves the teaching of undergraduate and postgraduate courses in regional planning and urban geography and the supervision of student research projects. Experience in regional planning and a knowledge of the Australian organizational frameworks for regional planning would be an advantage.
31 October, 1978.

LECTURER DEPARTMENT OF ORGANIC CHEMISTRY
Applications are invited from appropriately qualified persons who should be able to commence duties in January, 1979.
2 October 1978

TUTOR DEPARTMENT OF ENGLISH
The successful candidate may be asked to teach in any of the Pass subjects, with the possibility of some Honours teaching or supervision. Applicants must have at least an upper-second class Honours degree in English and be able to take up duties on or near 1st February, 1979.
31 October 1978

THE OPEN UNIVERSITY/ THE HEALTH EDUCATION COUNCIL

Course Development in the Area of Family Studies

The purpose of the project is to survey the teaching of child development/family life/parenthood topics in schools, to investigate the potential of the materials produced by the Community Education Section, for use in schools, and to develop distance learning materials for teachers based on those courses.
Applicants are likely to have had substantial experience of both teaching and research. They should be able to undertake classroom based teaching, the organisation of curriculum development workshops with teachers and the drafting of learning materials. They should also be able to define research objectives and methodologies, to undertake research projects, write up the research and prepare reports for both institutional and external use.
Applicants should be able to work on their own initiative, but within the environment of a project team and in collaboration with teachers, local education authorities and other providers.
The post is based at the Open University headquarters in Milton Keynes, Buckinghamshire. Some travel may be required during the first phase of the project, and also to collaborating schools and teachers' centres during the preparation of learning materials. The post is for two years and is available immediately. The appointment will be at an appropriate point on the range for Research staff: £3,660-£7,308, plus membership of USS, or secondment by arrangement. Applications close on 26th September 1978.

Application forms are available, by postcard request please, from The Recruitment Office (JD3530/2), The Open University, P.O. Box 76, Walton Hall, Milton Keynes MK7 6AL, or telephone Milton Keynes 63404: there is a 24 hour answering service on 63868.

UNIVERSITY OF SINGAPORE

ARCHITECTURE AND BUILDING

Applications are invited for teaching appointments, ranging from Lectureships to Professorships, in the Faculty of Architecture and Building from candidates with suitable postgraduate or professional qualifications and teaching/research experience.
Preference will be given to candidates who are able to teach in one or more of the following areas:
ARCHITECTURE: Design; Building Technology; Building Services.
BUILDING AND ESTATE MANAGEMENT: Valuation, Real Estate Economics; Real Estate Finance; Investment Analysis; Estate Management; Law of Real Property; Urban and Regional Planning.
BUILDING SCIENCE: Acoustics in Buildings; Lighting in Buildings; Mechanical and Electrical Services in Buildings.
Gross monthly emoluments in the range from S$1.445 to S$5,050 approx., the initial amount depending on the candidate's qualifications and experience and the level of appointment offered. In addition, the University pays a 13th month annual allowance of one month's salary in December of each year. Leave, subsidised housing, medical and provident fund benefits are also available.
Candidates should write to: The Registrar, University of Singapore, Kent Ridge, Singapore 5, giving curriculum vitae (bio-data), with full personal particulars and also the names and addresses of three referees.

UNIVERSITY OF SINGAPORE

ARCHITECTURE AND BUILDING

Applications are invited for teaching appointments, ranging from Lectureships to Professorships, in the Faculty of Architecture and Building from candidates with suitable postgraduate qualifications and teaching/research experience. Preference will be given to candidates who are able to teach in one or more of the following areas:
ARCHITECTURE: Design; Building Technology; Building Services.
BUILDING & ESTATE MANAGEMENT: Valuation, Real Estate Economics; Real Estate Finance; Investment Analysis; Estate Management; Law of Real Property; Urban & Regional Planning.
BUILDING SCIENCE: Acoustics in Buildings; Lighting in Buildings; Mechanical & Electrical Services in Buildings.
Gross monthly emoluments in the range from S$1445 to S$5050 approx., the initial amount depending on the candidate's qualifications and experience and the level of appointment offered. In addition, the University pays a 13th month annual allowance of one month's salary in December of each year. Leave, subsidised housing, medical and provident fund benefits are also available.
Candidates should write to: The Registrar, University of Singapore, Kent Ridge, Singapore 5, giving curriculum vitae (bio-data), with full personal particulars and also the names and addresses of three referees.

UNIVERSITY OF WESTERN AUSTRALIA

WESTERN AUSTRALIAN REGIONAL COMPUTING CENTRE

DIRECTOR

A person with a strong background in computing and considerable managerial experience is sought for this position to replace Mr. O. W. G. Moore who has accepted an appointment as a consultant to the State Government.
The W.A.R.C.C. is located on the campus of the University of Western Australia and provides a computing service primarily to educational institutions, government departments and statutory authorities. It is active in development across a spectrum of computing activities and, in particular, in the development of an experimental multi-host network.
The Director leads a staff of 58, including 18 professional officers and is responsible to a Board of Management for the efficient organisation and operation of the Centre. Current equipment includes a Dec system-10 and Cyber 73 and 172. The Cyber 172 is operated by the Centre for the Health Computing Services under a facilities management contract.
The salary for the appointment is currently $A31,632 p.a.
The conditions of service for senior administrative staff apply to this appointment. They include recreation, long service and sick leave entitlements and superannuation similar to FSSU. Further information available from the Staffing Officer of the University or from the Association of Commonwealth Universities (Appts), 36 Gordon Square, London WC1H 0PF.
Applications in duplicate stating full personal particulars, qualifications and experience close with the Staffing Officer, University of Western Australia, Nedlands, Western Australia 6009, on 30 September, 1978. Candidates should request three referees to write immediately to the Staffing Officer.

University of Stirling
Department of Economics

As a result of continued growth in student numbers applications are invited for the following posts.

Senior Lectureship in Public Finance
Duties will include teaching Public Finance at the postgraduate level and contributing to the development of new undergraduate degree programmes in Public Policy.

Lectureship in Marketing and Economics
Duties will include lecturing in Marketing to Business Studies students and lecturing and/or tutoring to economics students.

Lectureship in Economics
Applications are invited from persons with any area of interest in economics.

Teaching Assistant
(Two years)
Teaching will not exceed six hours a week and the appointee will be encouraged to register for a higher degree (no fees).
Starting date: February 1, 1979, or by arrangement.
Current Salary Scales (placing may be at any appropriate point on the scale):
Senior Lecturer: £7,074-£8,730 (USS/FSSU).
Lecturer: £3,660-£7,308 (USS/FSSU).
Teaching Assistant: £2,600-£2,700.
Further particulars for the four above posts are available from The Secretary (THES), University of Stirling, Stirling FK9 4LA, Scotland, to whom applications should be sent, together with the names of three referees, to arrive by September 23, 1978.

THE QUEEN'S COLLEGE GLASGOW
1 Park Drive, Glasgow, G3 6LP

SENIOR LECTURERS 'A'
DEPARTMENT OF PHYSIOTHERAPY
(Readvertisement)
(2 Posts)
Salary Scale: £7,155-£7,962 (bar)—£9,042 per annum

LECTURER 'A'
(1 Post)
Salary Scale: £4,056-£7,167 (bar)—£7,698 per annum

Further details and forms of application may be obtained from The Principal, to whom completed forms should be returned by Monday, 9th October, 1978.

ABERYSTWYTH
THE UNIVERSITY COLLEGE OF WALES

DEPARTMENTS OF APPLIED MATHEMATICS AND PHYSICS
RESEARCH IN LIQUID CAVITATION

Applications are invited for the post of POSTDOCTORAL RESEARCH ASSOCIATE tenable from 1st October, 1978, or as soon as possible thereafter.
Appointment for two years in the first instance. The research project is under the joint supervision of Professor K. Walters, Dr. W. M. Jones and Dr. D. H. Trevena and will involve the dynamic and static testing of the tensile strengths of various aviation fuels and similar liquids. Applicants should have research experience in some branch of physics or engineering.
Starting salary: £3,895 per annum (point 2 range 1A).
Application forms available from the Registrar. Closing date: 30 September, 1978.

ABERYSTWYTH
THE UNIVERSITY COLLEGE OF WALES

DEPARTMENT OF APPLIED MATHEMATICS
RESEARCH IN EXTENSIONAL FLOWS

Applications are invited for the post of POSTDOCTORAL RESEARCH ASSOCIATE tenable from 1st October, 1978, or as soon as possible thereafter. Appointment for two years. The research project is under the supervision of Professor K. Walters and will involve the evaluation of a converging flow extensional rheometer being constructed at the Rutherford Laboratory. Applicants should have research experience in mathematics, physics or engineering.
Starting salary: £3,895 (point 2, Range 1A).
Application forms are obtainable from the Registrar. Closing date: 30 September, 1978.

ABERYSTWYTH
THE UNIVERSITY COLLEGE OF WALES

DEPARTMENT OF AGRICULTURAL BOTANY

Applications are invited for the post of RESEARCH ASSISTANT to work on the Cytology of Festuca species. Fixed-term appointment up to three years from 1.10.78 or as soon as possible thereafter. Applicants should have a good honours degree in Genetics, Botany, Agricultural Botany or Biology.
Salary: £3,189 per annum on 1B range.
Application forms available from the Registrar, Old College, Aberystwyth, Dyfed. Closing date: 20 September 1978.

Universities continued

DEAKIN UNIVERSITY
Geelong, Australia

1979 ACADEMIC VACANCIES

Applications are invited from suitably qualified people for the positions listed below.

In 1979 the University will have about 4,000 students, of which about half will be enrolled in off campus courses. The main campus of the University is an 80 hectare site at Waurn Ponds, 8 kilometres south west of Geelong. Courses of an Open University type are already in operation and applicants should have an interest in off campus teaching.

Appointments at Lecturer or Senior Lecturer level may be made with an initial or fixed term. An initial term appointment is normally for a period of three years with a promise of review for permanent tenure after two years. A fixed term appointment is normally for a period of three years. Although the appointment may be extended for a further three years it cannot be translated into a permanent appointment.

Current Salary Ranges: Senior Lecturer $A20,365-$A23,737, Lecturer $A15,179-$A19,940.

SCHOOL OF HUMANITIES

LECTURER (Ref.: 78/1/06): Australian Studies is a major area of study within the School of Humanities. It is interdisciplinary in scope and embraces Australian history, sociology, literature, visual arts, etc. Courses of an Open University kind are being prepared for off campus or external students. One such course "The Australian City" is being offered in 1978 and a second course, "Regionalism and Australia", is being prepared for 1979. A third level course, "Contemporary Australia" planned for 1980, will be prepared during 1979. As the emphasis of future courses in this area will be influenced by the interests of the appointee, applicants should make firm statements about the relevance of their scholarly interests to the development of courses in Australian Studies. They should also indicate the suitability of these interests for the preparation of off campus courses.

SENIOR LECTURER/LECTURER IN LITERATURE (Ref.: 78/1/08): The courses being developed in the area of Literature are international and interdisciplinary in scope. There is a special emphasis on integrating literary criticism with creative writing. Applicants should have a higher degree in some field of literary studies, and should clearly indicate the relevance of their interests to courses of the kind broadly described above. Preference may be given to a candidate who has foreign language qualifications, or some experience in relating literature to areas such as drama, history, philosophy, women's studies or anthropology.

SENIOR LECTURER/LECTURER IN SOCIAL STUDIES OF SCIENCE (Ref.: 78/1/09)

Social Studies of Science is a major interest in the School of Humanities and it is hoped to develop a sequence of courses in this area. The first course in Social Studies of Science, "Knowledge and Power", will be offered both to off campus and on campus students in 1979 and further courses are planned. The University seeks candidates with interests in the history and philosophy of science, the sociology of science, the social implications of science and technology, etc.

SCHOOL OF SCIENCES

LECTURER IN PHYSIOLOGY (Ref. 78/1/12): The Division of Biological and Health Sciences offers undergraduate major programmes in Biology, Biochemistry, Nutrition and Food Chemistry, a graduate diploma of dietetics and participates in the teaching of a graduate diploma of industrial hygiene. Present research interests of the Division are in the areas of Toxicology, Endocrinology and Nutrition. The appointee will assist with lecturing in undergraduate Physiology and Biochemistry courses, with the major emphasis on Physiology. Applicants should possess a doctorate in an appropriate discipline and have some tertiary teaching experience. The appointment is offered on a fixed-term three years basis to commence on 1st January, 1979.

SCHOOL OF SOCIAL SCIENCES

SENIOR LECTURER/LECTURERS

The School offers courses for the B.A. degree. These courses are in the Open University format of the tutorial-in-print, designed by teams of academic staff, usually from more than one discipline. The School has been developing courses dealing with the modern economics, history, politics and societies of industrial Europe, and with the interactions between these industrial societies and non-industrial ones. The School has an emphasis on international, defence and conflict studies, and an area emphasis on Europe, Africa and Oceania. On this occasion the School proposes to appoint to the position listed below according to the qualifications and experience of the successful applicants. The special interests mentioned are preferences only.

SENIOR LECTURER/LECTURER IN ECONOMICS (Ref.: 78/1/13): A special interest in either European economics or Development Economics is desirable.

LECTURER IN HISTORY (Ref.: 78/1/14): A special interest in modern international, European or Commonwealth history is desirable.

LECTURER IN POLITICAL SCIENCE (Ref.: 78/1/15): A special interest in international relations or the politics of developing nations is desirable.

SENIOR LECTURER/LECTURER IN SOCIAL ANTHROPOLOGY (Ref.: 78/1/16): No special region or type of society is preferred, but an interest in the anthropology of complex societies would be an advantage.

INTER-SCHOOL POST

SENIOR LECTURER/LECTURER IN SOCIOLOGY (Ref. 78/1/18): The Schools of Education, Humanities and Social Sciences all have interests in the area of sociology and the appointee would be expected to act as a co-ordinator between the three schools and to develop courses in sociology. The School affiliation of the post will be determined by the research interests of the appointee. Candidate should have scholarly interests in mainstream sociology and in one or more of the following areas: the sociology of knowledge, the methodology of the social sciences, sociology of education, sociology of religion, sociology of art and literature, etc.

The post may be filled at either lecturer or senior lecturer level.

Applications (quoting reference number) should include a full curriculum vitae and the names and addresses of three academic referees and should be sent to the undersigned so as to arrive by 1 October, 1978. Applicants resident in North America, Europe or Africa should also send a copy of their applications to the Association of Commonwealth Universities (Appts.), 36 Gordon Square, London WC1H 0PF, from whom further details about positions can be obtained.

A. J. PRITCHARD, University Secretary, P.O. Box 125, Belmont, Vic. 3216, Australia.

ASTON IN BIRMINGHAM
THE UNIVERSITY
DEPARTMENT OF CONSTRUCTION AND ENVIRONMENTAL HEALTH

SENIOR LECTURER IN CONSTRUCTION ECONOMICS

Applications are invited from qualified economists to undertake responsibility primarily for the administration and development of postgraduate activity in economics applied to building.

Applicants should have a good record of postgraduate achievement in research and its supervision. Responsibility will extend to a part in undergraduate teaching.

Salary scale: £7,306 to £9,263 per annum. Appointments are normally made to the first point of the scale.

Application forms and further particulars may be obtained from the Staff Officer (Ref. No. 307/150), University of Aston in Birmingham, Gosta Green, Birmingham B4 7ET (Tel. 021-359 3611, Ext. 2011), to whom applications should be forwarded not later than 29th September, 1978.

BIRMINGHAM
THE UNIVERSITY
DEPARTMENT OF CHEMISTRY

LECTURESHIP

Applications are invited for a post tenable from November, 1978. The successful candidate will be required to join in the Departmental teaching programme in mainstream Inorganic Chemistry. Willingness to assist with teaching in Analytical Chemistry would be an advantage. The person appointed will be expected to formulate a research programme as part of the Departmental studies in Solid Chemistry. Some preference will be given to those with thoughts in inorganic solid structures.

Salary according to age and experience will be on the scale £3,660 to £7,308 (to be reviewed from 1st October) plus superannuation.

Further particulars are available from the Assistant Registrar, Science and Engineering, University of Birmingham, P.O. Box 363, Birmingham B15 2TT, to whom applications (three copies), including full curriculum vitae and naming three referees, should be sent by 6th October, 1978. Please quote ref. 1017.

NATIONAL UNIVERSITY OF LESOTHO

Applications are invited for the post of:

ASSISTANT LECTURER/ LECTURER/ SENIOR LECTURER

In COMPUTING within the DEPARTMENT of MATHEMATICS. Minimum qualifications are an honours degree in Mathematics or Computing, or a pass degree with considerable practical experience in Computing. Experience in teaching Numerical Analysis at undergraduate level would be an advantage. Appointee will be a member of a two-person computing unit within the Mathematics Department with main duties to provide a programming service to the University and to teach BASIC to students. Facilities include an HP9830 mini-computer and peripherals. Appointee will be expected to assume duties as soon as possible. Salary scales: Assistant Lecturer: R4,572-R5,022 p.a.; Lecturer R5,493-R7,527; Senior Lecturer: R7,473-R8,493 p.a. (£1 sterling=£1.67). The British Government may supplement salary in range £1,764-£2,608 p.a. (sterling) for married appointee of £570-£1,410 p.a. (sterling) for single appointee (reviewed annually and normally free of all tax) and provide childrens education allowances and holiday visit passages. Family passages: Non-contributory pension scheme for appointees on Permanent Terms of Service. Appointees on short contract terms receive 25% gratuity in lieu of superannuation for the first two years of the contract, rising to 27½% and 30% for each subsequent and similar period of Service. 15% Inducement allowance for expatriates not qualifying for any supplementation scheme. Accommodation at reasonable rentals. Education allowance for expatriates. Vacation and study leave. Detailed applications (three copies) with curriculum vitae and naming three referees by 6 October to the Registrar (Appointments), NUL, Roma, Lesotho. Applicants resident in the UK should also send a copy to Inter-University Council, 90-91 Tottenham Court Road, London W1P 0DT. Further particulars may be obtained from either address.

UNIVERSITY OF THE WEST INDIES—TRINIDAD

Applications are invited for the post of

SENIOR LECTURER/ LECTURER IN PHYSICS

Must have specialization preferably in the fields of Optics including Infrared Optics and thin Films, or in High Energy Nuclear Physics, including Plasmas, with expertise on the interaction of radiation with materials. Salary scales, 1977-78, Senior Lecturer, TT$25,827 to 34,017 p.a.; Lecturer TT$19,071 to 29,799 p.a. (£1 sterling equals TT$4.62) FSSU. Unfurnished accommodation if available at 10 per cent or furnished at 12½ per cent or housing allowance of 20 per cent of pensionable salary. Family passages. Study and Travel grant. Detailed applications (2 copies) with curriculum vitae and naming 3 referees to be sent direct to Secretary, UWI, St Augustine, Trinidad, as soon as possible. Applicants resident in the UK should also send one copy to Inter-University Council, 90-91 Tottenham Court Road, London W1P 0DT. Further particulars may be obtained from either address.

UNIVERSITY COLLEGE GALWAY

JUNIOR LECTURESHIP IN GEOLOGY

Applications are invited for the above post. Salary scale £4,757 by (10) to £8,575. Closing date for receipt of applications 6 October, 1978. Further information may be obtained from the Registrar.

UNIVERSITY OF DUBLIN
Trinity College

LECTURERS IN EDUCATION

Applications are invited from persons with good school teaching experience for three posts in the Department of Teacher Education, Trinity College, Dublin.

Post 1 will be concerned with Language Teaching.

Post 2 with Science Teaching and

Post 3 micro-teaching and Education Technology.

Advanced qualifications in Education and experience of research in teaching and learning will be a strong recommendation.

Salary scale. £4,232 to £8,321. Appointment will be made within the range £4,232 to £4,680. There is a non-contributory F.S.S.U.-type pension scheme.

Application forms and further particulars relating to these posts may be obtained from The Establishment Officer, West Theatre, Trinity College, Dublin 2.

The closing date for receipt of applications will be September 29, 1978.

BELFAST
The Queen's University

LECTURESHIPS IN ECONOMICS

Applications are invited for two posts of lecturer in Economics, tenable from 1st January, 1979, or such other dates as may be arranged. One of the lectureships will be filled at any point on the scale for lecturers and the other will be filled at one of the first three points on the scale and will be subject to a period of probation of up to three years.

The Salary scale (under review) is £3,660 to £7,308 with contributory pension rights under FSSU/USS. Initial placing on the salary scale will depend on age, qualifications and experience. Assistance is available with removal expenses.

Further particulars may be obtained from the Personnel Officer, The Queen's University of Belfast, BT7 1NN, Northern Ireland. Closing date: 20th October, 1978 (Please quote Ref. 78/THES)

University College Dublin

Applications are invited by the Governing Body of the College for the following full-time statutory post:

PROFESSORSHIP OF ANGLO-IRISH LITERATURE AND DRAMA

Prior to application, further information (including details of application procedure) should be obtained from the Secretary and Bursar, University College, Belfield, Dublin 4. Telephone enquiries: 693244 Ext. 431.

The latest date for receipt of completed applications is THURSDAY, 12th OCTOBER, 1978.

LEEDS
THE UNIVERSITY
SCHOOL OF EDUCATION

Applications are invited from persons qualified in educational psychology for the post of LECTURER in EDUCATION from 1 January, 1979. The vacancy arises from the appointment of the present holder to the chair of Educational Psychology at London University Institute of Education. The duties are principally concerned with the teaching of educational psychology to higher degree and graduate certificate students.

Salary on the scale for Lecturers, £3,883 to £7,754 (under review).

Forms of application and further details may be obtained from the Registrar, The University, Leeds LS2 9JT (quoting reference number 28/30/DG).

Closing date for applications is 29 September, 1978.

BELFAST
Queen's University

POST-DOCTORAL RESEARCH ASSISTANT
Department of Applied Mathematics and Theoretical Physics

A post-doctoral research assistant is required to work on the theory of resonant multiphoton processes (particularly multiphoton ionization) with Dr. S. Swain. The basic requirement is a good working knowledge of quantum mechanics; experience in quantum optics would be an advantage but is not essential.

The appointment, which is funded by the S.R.C., is for a period of twelve months at a salary of £3,660 (with U.S.S.).

Curriculum vitae and the names and addresses of two referees should be sent as soon as possible to the Personnel Officer, The Queen's University of Belfast, BT7 1NN, N. Ireland.

ABERDEEN
THE UNIVERSITY
DEPARTMENT OF NATURAL PHILOSOPHY

SENIOR LECTURESHIP

Applications are invited for a SENIOR LECTURESHIP in the Department of Natural Philosophy from candidates well qualified for research and undergraduate teaching in theoretical physics. The successful applicant will be expected to take up his or her duties as soon as convenient and not later than 1 October, 1979.

Salary on scale £7,074-£8,830 per annum, with appropriate placing.

Further particulars from The Secretary, The University, Aberdeen, with whom applications (12 copies) should be lodged by 1 October, 1978.

BRADFORD
THE UNIVERSITY

LECTURER IN MANAGEMENT STUDIES FOR ENGINEERS

Applicants must have good academic qualifications and industrial experience together embracing engineering and management, ability to teach the more quantitative business studies subjects (finance and economics) to engineering students, and to fill an research at the interface between management and engineering, preferably manufacturing or mechanical engineering. Salary within range £3,883 to £7,761 per annum. Superannuable.

Further particulars and application forms (to be returned as soon as possible) obtainable from the Registrar, Reference MSE L 1 JH, University of Bradford, West Yorkshire BD7 1DP.

ASTON IN BIRMINGHAM
THE UNIVERSITY

PENSIONS OFFICER

Applications are invited for the post of PENSIONS OFFICER in the Staffing Department. The Pensions Officer will be responsible to the Staff Officer for estimating various pension schemes in operation in the University and for providing advice and guidance on pension matters to individual members of staff as required. The successful candidate will be of graduate level and will ideally have had experience of pensions administration. However, applications will also be considered from candidates with insurance, personnel, or employee welfare background. The salary for this post will be within the Administrative Grade IA (£3,384 to £6,665) or for an exceptionally well qualified candidate within Administrative Grade II (£6,317 to £7,754).

Both scales are currently under review.

Application form and further details may be obtained from the Staff Officer, The University of Aston in Birmingham, Gosta Green, Birmingham B4 7ET, quoting reference number R/073/156.

GLASGOW
THE UNIVERSITY

SENIOR LECTURESHIP IN ACCOUNTANCY

Applications are invited from persons with a record of scholarship, writing and research for a Senior Lectureship in Accountancy. Placement will be at an appropriate point, according to age and experience, on the Senior Lecturers' salary scale of £7,306 to £9,263 per annum. Normal superannuation arrangements will apply.

The Department of Accountancy in the University of Glasgow, one of the strongest in the UK, provides courses for the specialist degree of Bachelor of Accountancy (BAcc), at honours and at ordinary levels and for a postgraduate Diploma in Accountancy for graduates in other disciplines. The Department also contributes to degrees in law, in social sciences and in engineering, and to the postgraduate work of the Scottish Business School. Supervision and instruction of candidates for higher degrees in accountancy (PhD and MAcc) is undertaken. Areas of teaching and research include accounting theory, financial accounting, management accounting, business finance, financial management and audit theory.

Further particulars may be had from the Secretary of the University Court (Room 1H), University of Glasgow, Glasgow G12 8QQ, with whom applications should be lodged on or before 30th September, 1978.

In reply please quote Ref. No. 4110 T.

UWIST
University of Wales

TOWN PLANNING LECTURER

(Planning in Developing Countries)

Salary: £3,660 to £7,308

Requests (quoting Ref. THES) for details and application form to Personnel Section (Academic), UWIST, Cardiff CF1 3NU.

Closing date: 29 September, 1978.

DUNDEE
THE UNIVERSITY
CHAIR OF CIVIL ENGINEERING

Applications are invited for appointment to this Chair which will fall vacant on December 31, 1978, on the retirement of Professor A. H. Cusens.

Further particulars of the appointment may be obtained from The Secretary, The University, Dundee DD1 4HN, with whom applications (ten copies; overseas applicants one copy), containing the names of three referees should be lodged not later than October 20, 1978. Please quote Reference EST/31/78C.

CRANFIELD
NATIONAL COLLEGE OF AGRICULTURAL ENGINEERING
Silsoe, Bedfordshire
(a School of Cranfield Institute of Technology)

Applications are invited for the post of CAREERS and RECRUITMENT OFFICER.

The College has a student population of 220, with a yearly intake of approximately 50 for B.Sc. degrees, 30 for M.Sc.s and 50 for other postgraduate courses. The appointment is primarily concerned with the administration and co-ordination of the Careers Advisory Service and the recruitment of students.

Applicants will ideally be graduates with some experience of careers work. Industrial experience would be helpful.

Salary is in the range £3,384 to £6,550 per annum (under review) according to qualifications and experience.

Application form and further particulars from the Head of Administration, National College of Agricultural Engineering, Silsoe, Bedford MK45 4DT. Tel. Silsoe (STD code 0525) 60428.

EDINBURGH
THE UNIVERSITY
DEPARTMENT OF EDUCATION AND GODFREY THOMSON RESEARCH UNIT

Applications are invited for the post of LECTURER in EDUCATIONAL STUDIES. Applicants should have qualifications in the field of educational statistics and research methodology, and have experience of work in test construction. The person appointed would have responsibility for the day-to-day running of the Godfrey Thomson Research Unit, and would teach and supervise research in the department. Salary on the Lecturer Scale, £3,660 to £6,178 per annum.

Applications (three copies) should be sent to the Secretary to the University, Old College, South Bridge, Edinburgh, by 30th September, 1978. Please quote reference 1060.

LEEDS
THE UNIVERSITY
DEPARTMENT OF ORGANIC CHEMISTRY

Applications are invited for the post of LABORATORY INSTRUCTOR in the Department of Organic Chemistry. Duties include the design and development of laboratory exercises in organic chemistry and teaching and administration of laboratory classes. Applicants should have a degree or equivalent qualification in chemistry and preferably some teaching experience, not necessarily in a university.

Salary on the 1B Scale for Other Related Staff: £3,189 to £5,282 (under review) according to qualifications and experience.

Application forms and further particulars may be obtained from the Registrar, The University, Leeds LS2 9JT, quoting reference number 47/7/DG. Closing date for applications 29 September 1978.

LEEDS
THE UNIVERSITY
DEPARTMENT OF COMPUTER STUDIES

The Department has a vacancy for a temporary TEACHING ASSISTANT for a fixed period from 1 October, 1978, to 30 June, 1979. The successful applicant will be expected to take a full part in the academic teaching of the Department, which includes three single-subject degree schemes (in Computational Science, Operational Research with Computing, Data Processing) and teaching numerical computation to applied scientists, as well as teaching twenty combined honours degree schemes. Expertise in any area of computing will be considered.

Salary on the scale £3,883 per year to £1,883 per year 1A (under review) within the 1A range for Other Related Staff.

Application forms and further details may be obtained from the Registrar, The University, Leeds LS2 9JT (quoting reference number 40/13/DG). Closing date for applications is 14 September, 1978.

Universities continued

GLASGOW
THE UNIVERSITY
CHAIR OF DRAMA

The Chair of Drama will become vacant on October 1, 1979. Applications are invited from those with practical experience of the theatre as well as from those with interests in the theory and history of drama.

Further particulars may be had from The Secretary of the University Court (Room 1H), The University of Glasgow, Glasgow G12 8QQ, with whom applications (15 copies) giving the names and addresses of three referees, should be lodged on or before September 30, 1978.

In reply please quote Ref. No. 42081.

LONDON
THE UNIVERSITY
GOLDSMITHS' COLLEGE
New Cross, London SE14 6NW

DIRECTOR NATIONAL CENTRE FOR ORCHESTRAL STUDIES

Applications are invited for the Directorship of the newly established National Centre. The person appointed will be expected to take up duty at an early date. The Centre will, from September, 1979, provide teaching and study at a high professional level and students will be required to undertake a one year course leading to a College Diploma.

The Director will be responsible to the National Centre for Orchestral Studies Trust and the College Delegacy. Considerable knowledge and experience of the musical profession and the operation of orchestras are essential.

This is a new and challenging post and salary will be commensurate with the responsibilities and status.

Further detailed particulars of the College, the National Centre and the post, including salary, can be obtained on written request to the Personnel Officer to whom applications (3 copies) with the names of three referees should be sent as soon as possible and in any case, not later than 29th September 1978.

LONDON
IMPERIAL COLLEGE

RESEARCH ASSISTANT IN LASER DYNAMICS AND NON-LINEAR OPTICS

A post-doctoral research assistant is required in the optics section of the Blackett Laboratory. The successful candidate will engage in a theoretical research programme in the field of laser dynamics and non-linear optics. Applicants should hold a Ph.D. degree (or equivalent) or be in the process of completing their doctoral thesis. A reasonable background in theoretical physics is a prerequisite and previous experience in quantum electronics would be an advantage. The appointment will be for two years and the salary will be at an appropriate point on the 1A scale starting at £4,134 (under review), including London allowance plus U.S.S.

Applications, together with at least two references, to Dr. G. H. C. New, Department of Physics, Imperial College, London SW7 2AZ, to arrive before 2nd October, 1978. Interviews will be held in mid-October and the appointment will commence as soon thereafter as possible.

LONDON
THE UNIVERSITY
INSTITUTE OF PSYCHIATRY
ADDICTION RESEARCH UNIT

SOCIOLOGIST required with published Research, preferably in the sociology of social work or medicine. The person appointed would be immediately responsible to Dr David Robinson and will share with him in exploring two new lines of enquiry: one of these will be a study of the ideology and operation of special alcoholism treatment units and the second will be a feasibility study of the inhibitors to the implementation of preventive policies in relation to smoking.

Starting salary within the range £3,660-£4,834 plus £450 London allowance. Salary scale range 1A £3,660-£6,178 plus £450 London allowance.

Further details can be obtained from Ms M. Sheehan or Dr David Robinson, Institute of Psychiatry, Addiction Research Unit, 101 Denmark Hill, London S.E.5 quoting reference THES/AR/19. Closing date September 18, 1978.

LONDON
THE UNIVERSITY
INSTITUTE OF EDUCATION
DEPARTMENT OF CHILD DEVELOPMENT AND EDUCATIONAL PSYCHOLOGY

Applications are invited for the post of RESEARCH OFFICER on a three year SSRC research project investigating the psychological effects of collaborative learning among school pupils.

Applicants should have relevant experience in schools, and be willing to help with the basic clerical work of the project and work closely with teachers. Salary within Research Officer range £3,314 to £4,611 per annum plus £450 per annum London Allowance.

Application forms and further particulars available from Personnel, University of London Institute of Education, Bedford Way, London WC1H 0AL quoting reference RO/PS. Completed applications required not later than October 6.

LONDON
THE UNIVERSITY
BIRKBECK COLLEGE
DEPARTMENT OF CHEMISTRY

RESEARCH OFFICER IN ORGANIC CHEMISTRY

Applications are invited from Chemists with research experience to initiate a project on the synthesis of polyacetylene derivatives of carbohydrates of potential biological importance. Experience in carbohydrate or acetylene chemistry would be an advantage. The appointment will be for one year initially, but is likely to be renewed for a second year. Salary in the range £3,665 to £4,155 (under review from October 1, 1978) plus £450 London Allowance.

Applications in writing by October 13th with curriculum vitae and names of two referees to Dr N. R. Williams, THL, Birkbeck College, Department of Chemistry, Malet Street, London WC1E 7HX.

LONDON
THE UNIVERSITY
QUEEN MARY COLLEGE
ADMINISTRATION

Applications are invited from graduates for the post of ADMINISTRATIVE ASSISTANT to the Computer Science and Statistics Department to handle administrative duties, including certain financial and academic matters. Salary on scale (under review) £3,384 to £6,555 per annum plus £450 London Allowance.

Application forms and further details available from The Registrar, (THES) Queen Mary College, Mile End Road, London E1 4NS, to be returned by 26 September.

LONDON
UNIVERSITY COLLEGE
DEPARTMENT OF BIOCHEMISTRY

Applications are invited for two LECTURER posts in the Department of Biochemistry. Starting date by mutual agreement. Applicants should be graduates in Biochemistry or Molecular Biology with post-doctoral experience. They should possess the capacity to initiate their own research programmes and be prepared to contribute fully to the teaching programme of the Department. Excellent facilities for research are available. Salary according to age and experience within the range £3,883 to £7,754 p.a. plus £450 London Allowance.

Applications including full curriculum vitae, list of publications and names of two academic referees should be sent by the end of October to Professor B. R. Rabin, (TH), Department of Biochemistry, University College London, Gower St., London, WC1E 6BT.

MANCHESTER
THE UNIVERSITY
INSTITUTE OF SCIENCE AND TECHNOLOGY

EXPERIMENTAL OFFICER
STRUCTURAL STUDIES BY DIFFRACTION METHODS

Applications are invited from graduates of either sex for the post of EXPERIMENTAL OFFICER in the electron diffraction group of the Department of Chemistry, which has excellent equipment for gas-phase studies of molecular structure. The Experimental Officer will be responsible for the operation and development of the equipment, and will participate in structure determinations, employing powerful computing facilities. Opportunities may arise to assist in the expansion of an existing X-ray diffraction laboratory. A higher degree, and previous experience of X-ray or electron diffraction or of structural chemistry and computing, would be an advantage.

Salary on Experimental Officer Grade 1B £3,189 to £5,282 per annum (under review).

Inquiries may be made to Dr. B. Beagley (Department of Chemistry) and application forms may be obtained from the Registrar, UMIST, P.O. Box 88, Manchester M60 1QD.

MANCHESTER
THE UNIVERSITY
INSTITUTE OF SCIENCE AND TECHNOLOGY

DEMONSTRATOR—BUILDING

The Department of Building requires a Demonstrator for a two-year contract commencing in September, 1978, or soon as possible thereafter. The work involves laboratory demonstrations and some teaching duties. The post of Demonstrator allows opportunities for research and, subject to the normal entry requirements Demonstrators may enrol for a higher degree. The fields of work in the Department of Building include Building Materials, Structural Analysis, Environmental Design of Buildings, Energy Conservation, Building Services, Building Construction, Project Management and Building Economics. Specific duties will be determined in the light of the successful candidate's skills and interests. Graduates (of either sex) in building, physics, engineering and comparable disciplines would have suitable backgrounds and find interesting areas of work.

Salary will be within the scale £3,189 to £4,601.

Applications should be sent to Professor Burberry, Department of Building, UMIST, P.O. Box 88, Manchester M60 1QD, as soon as possible.

MANCHESTER
THE UNIVERSITY
GEORGE HARRISON CHAIR OF BOTANY

Applications are invited for the George Harrison Chair of Botany which will fall vacant on October 1, 1979, on the retirement of Professor D. H. Valentine. The other Chair in Botany is the Barker Chair of Cryptogamic Botany which is held by Professor John Calhoun. Particulars of the appointment may be obtained from the Registrar.

Applications (two copies, one suitable for photocopying), giving full details of qualifications, experience, research, etc., and the names and addresses of three persons to whom reference may be made, should be sent to the Registrar, The University, Manchester M13 9PL, by October 18, 1978.

NEW ZEALAND
UNIVERSITY OF OTAGO
and
OTAGO HOSPITAL BOARD
Dunedin

SENIOR LECTURER IN MEDICINE (INFECTIOUS DISEASES) and CLINICAL MICROBIOLOGY

Applications are invited for the position of Senior Lecturer in Medicine (Infectious diseases) in the Department of Medicine, University of Otago, and Consultant in Infectious Diseases and Clinical Microbiology to the Otago Hospital Board.

This is a full-time University-Hospital post with University conditions of appointment and carrying hospital status in the Dunedin Hospitals.

Salary: NZ$18,022 to NZ$21,302 per annum inclusive of cost-of-living adjustments. A further adjustment is pending.

To compensate for clinical responsibility, an allowance not exceeding 10 per cent of basic salary may be paid.

Further particulars are available from the Association of Commonwealth Universities (Appts), 36 Gordon Square, London WC1H 0PF or from the Registrar of the University, Box 56, Dunedin.

Applications close on 31st October, 1978.

NEW ZEALAND
UNIVERSITY OF OTAGO
Dunedin

ASSISTANT LECTURER IN GEOGRAPHY

Applications are invited for an Assistant Lecturer in the Department of Geography. The position available is for a physical geographer with special interest in biogeography.

Salary Scale: NZ$7,632 to $9,449 per annum. Appointment will be made according to qualifications and experience.

Further particulars are available from the Association of Commonwealth Universities (Appts), 36 Gordon Square, London WC1H 0PF, or from the Registrar of the University, P.O. Box 56, Dunedin.

Applications close on October 31, 1978.

NEW ZEALAND
VICTORIA UNIVERSITY OF WELLINGTON

MATHEMATICS STATISTICS

LECTURESHIP in the DEPARTMENT of MATHEMATICS. Research and teaching experience in mathematical statistics and/or probability theory required. Some preference will be given to applicants with a background in practical time series analysis or medical statistics. From 1st February, 1979.

Closing date: 16th October, 1978.

Salaries: The salary scale for Lecturers is NZ$10,885 to NZ$12,969 p.a. including cost of living and other allowances. Salary scales are under review and a substantial general increase is expected. Fares paid to New Zealand.

Conditions of appointment and method of application obtainable from the Association of Commonwealth Universities (Appts), 36 Gordon Square, London WC1H 0PF.

NEW ZEALAND
THE MASSEY UNIVERSITY
Palmerston North

LECTURER/SENIOR LECTURER IN PIG HUSBANDRY AND DIRECTOR OF PIG RESEARCH CENTRE

Applications are invited for the above-mentioned position. The successful applicant will become a member of the Dairy Husbandry Department responsible to the Head of that Department responsible to the Head of that Department, for teaching and to the Vice Chancellor, for the Pig Research Centre.

At present pig production courses involve about one hundred hours of undergraduate teaching annually plus post-graduate student teaching and supervision.

The Pig Research Centre has a staff of one Research Officer and three permanent stockmen. The Director reports to the University Farms Committee, a subcommittee which is made up of the University Council Appointees and New Zealand Pork Industry Council members. The Centre is a University Facility, funded jointly by the Pork Industry Council, the Ministry of Agriculture and Fisheries, and the University.

Salary: Senior Lecturer NZ$13,424 to $16,411; Lecturer NZ$10,585 to $12,969.

Further details of the position together with the conditions of appointment may be obtained from the Association of Commonwealth (Appts.), 36 Gordon Square, London WC1H 0PF, or the Registrar of the University. Applications close on 29 September 1978.

OMAN
CENTRE OF MIDDLE EASTERN AND ISLAMIC STUDIES

PROJECT FIELD MANAGER

Project Field Manager required for the Khabura Development Project, Sultanate of Oman. This is a rural development project funded by Petroleum Development Oman, in collaboration with and responsible to Oman Government Ministries and associated with the University of Durham. Applicants should have wide rural interest and working experience outside the United Kingdom, preferably in the Arab world. A knowledge of spoken Arabic would be a strong qualification but its initial absence would not disqualify. The Khabura Centre has its own small farm unit and is designed on a self-help basis, in a variety of commercially viable rural enterprises. Furnished accommodation services, transport and annual leave fares are supplied. Salary starting in range £8,000 to £10,000 per annum sterling equivalent, depending on experience.

Further particulars from Professor H. Bowen-Jones, Centre for Middle Eastern and Islamic Studies, care of Department of Geography, Science Laboratories, South Road, Durham, to whom applications should be submitted.

OMAN
CENTRE OF MIDDLE EASTERN AND ISLAMIC STUDIES

AGRICULTURALIST

Agriculturalist required for the Khabura Development Project, Sultanate of Oman. This is a rural development project funded by Petroleum Development Oman, in collaboration with and responsible to Oman Government Ministries and associated with the University of Durham. The Khabura Centre has its own small farm including fodder production units, flocks of sheep and goats. The agriculturalist would be particularly responsible for further developing and demonstrating to local people commercially viable and practical farming systems. Furnished accommodation, services, transport and annual leave fares are supplied. Salary starting at £6,000 to £7,000 per annum sterling equivalent, depending on experience.

Further particulars from Professor H. Bowen-Jones, Centre for Middle Eastern and Islamic Studies, care of Department of Geography, Science Laboratories, South Road, Durham, to whom applications should be submitted.

OXFORD
THE UNIVERSITY

READERSHIP IN FRENCH LITERATURE

The electors intend to proceed to an election to the Readership in French Literature which is now vacant. The stipend of the reader will be on a scale which is at present £7,074-£8,730 a year.

Applications (fourteen copies), naming three referees but without testimonials, should be received not later than 6th October, 1978, by the Acting Registrar, University Offices, Wellington Square, Oxford OX1 2JD, from whom further particulars may be obtained.

SHEFFIELD
THE UNIVERSITY
CAREERS ADVISORY SERVICE

Applications are invited from men and women graduates for a post of CAREERS ADVISER. Candidates should preferably be between the ages of 28 and 40 and hold a degree in Arts or Social Science subjects. They should also have successful working experience in one or more of the industrial, commercial or public sector fields in which graduates are employed. Training and/or experience in counselling/vocational guidance could be an advantage.

Initial salary on the scale £5,954 to £7,308 a year.

Particulars from the Registrar and Secretary, The University, Sheffield S10 2TN, to whom applications (five copies) should be sent by 25th September, 1978. Quote reference: R196/DI.

SOUTHAMPTON
THE UNIVERSITY

CHAIR OF POLITICS

Applications are invited for the CHAIR of POLITICS. Salary within the professorial range. Applicants may have interests in any field appropriate to a Department of Politics but applications will be especially welcomed from scholars with interests in (a) comparative politics or (b) international relations or (c) political theory.

Further particulars may be obtained from the Secretary and Registrar, The University, Southampton, SO9 5NH, and applications (10 copies from applicants in the United Kingdom) must be submitted before 14 October, 1978.

SUSSEX
THE UNIVERSITY

CHAIR OF LAW

Applications are invited for the CHAIR of LAW from candidates in any field of Law. The starting date will be 1st October, 1979, and the salary will be not less than £9,445 per annum with U.S.S. Benefits.

Application forms and further particulars may be obtained from the Staff Records and Recruitment Officer, Sussex House, University of Sussex, Falmer, Brighton BN1 9RH, to whom applications should be returned by 13th October, 1978.

RHODESIA
THE UNIVERSITY
FACULTY OF ARTS

Applications are invited for appointment as LECTURER or SENIOR LECTURER in:—

ENGLISH: Preference will be given to candidates whose main interests are in literature from 1800 to the present, who have an interest in African, Afro-American and Caribbean literature, but who are prepared to teach outside these areas. Alternatively, candidates with a strong interest in Drama (British, American and African) and competence in teaching practical drama would receive serious consideration.

FRENCH (Department of Modern Languages): First post—Preference will be given to a specialist in Medieval or 16th Century Literature. Consideration would, however, be given to candidates in other periods willing to expand their range.

Second post: Teaching of an intensive introductory course to beginners in French with little or no previous experience of the language. Candidates must therefore clearly state their ability and experience in this field of teaching French, including the use of the language laboratory.

Salary Scales (approximate sterling equivalents): Senior Lecturer £7,606 by £290 to £8,491 by £313 to £10,036. Lecturer Grade I £5,869 by £259 to £7,936. Lecturer Grade II £4,360 by £224 to £6,380 by £259 to £6,675.

Appointment to the posts in the Departments of English and Modern Languages may be on permanent, pensionable terms or for a fixed term of not less than one year. Applicants should indicate in their applications their date of availability.

Permanent Pensionable Terms: Family passages and allowance towards transport of effects on appointment. Installation loan of up to half of one year's salary if required. Unfurnished University accommodation guaranteed for a period of at least three years for persons recruited from outside Rhodesia. Sabbatical leave and Triennial contact visits, with travel allowance. Superannuation and medical aid schemes.

Short Term Contracts: Family passages and allowance towards transport of effects. Assistance with accommodation for persons recruited from outside Rhodesia.

Applications: (6 copies) giving details of personal particulars, qualifications, experience and publications together with the names and addresses of three referees should be sent to the Senior Assistant Registrar (Staff), University of Rhodesia, P.O. Box MP 167, Mount Pleasant, Salisbury, Rhodesia. Overseas applicants should send an additional copy of their applications to the Association of Commonwealth Universities (Appts.), 36 Gordon Square, London WC1H 0PF. Further particulars may be obtained from either of the above.

Closing date for receipt of applications 30 September, 1978.

British subjects considering applying for posts in Rhodesia are urged to consult the Foreign and Commonwealth Office (telephone 233 4143) or their nearest British Consular Office.

ST. ANDREWS
THE UNIVERSITY

CHAIR OF DIVINITY

Applications are invited for the CHAIR of DIVINITY which is now vacant. Salary within professorial range: F.S.S.U./U.S.S.

Applications (preferably in typescript) with the names of three referees should be lodged by 16th October, 1978, with the Establishments Officer, The University, College Gate, St. Andrews, Fife, from whom further particulars may be obtained.

SURREY
THE UNIVERSITY
DEPARTMENT OF ELECTRONIC AND ELECTRICAL ENGINEERING

LECTURER IN TELECOMMUNICATIONS

LECTURER IN COMPUTER ENGINEERING

Applications are invited for two lectureships. Candidates should hold a good honours degree in electronic engineering or a related discipline and should have some industrial or research experience in telecommunications or in the engineering of computers or digital systems.

Salary in the range £3,660 to £7,308, depending on qualifications and experience. Superannuation is under USS conditions.

Further particulars about the post may be obtained from the Academic Registrar (LFG), University of Surrey, Guildford, Surrey GU2 5XH, or telephone Guildford 71281, ext. 452. Applications from men and women in the form of a curriculum vitae, together with names and addresses of two referees, should be sent to the above by 2nd October, 1978.

SURREY
THE UNIVERSITY
DEPARTMENT OF BIOCHEMISTRY

LECTURER IN FOOD SCIENCE

Applications are invited from suitable qualified graduates for a Lectureship in Food Science in the Department of Biochemistry. Preference will be given to applicants with postgraduate experience, and industrial experience would also be advantageous.

Salary will be within the range £3,660 to £7,308 per annum according to qualifications and experience. Superannuation will be under USS conditions.

Further particulars about the post may be obtained from the Academic Registrar (LFG), University of Surrey, Guildford, Surrey GU2 5XH, or telephone Guildford 71281, ext. 452. Applications from men and women in the form of a curriculum vitae, together with the names and addresses of two referees should be sent to the above by 29th September, 1978.

SURREY
THE UNIVERSITY
DEPARTMENT OF BIOCHEMISTRY

LECTURER IN BIOCHEMISTRY

Applications are invited from suitably qualified graduates for a Lectureship in Biochemistry in the Department of Biochemistry. Preference will be given to applicants with postgraduate experience and to those with an interest in pharmacological biochemistry. Industrial experience would also be considered advantageous.

Salary will be within the range £3,660 to £7,308 per annum according to qualifications and experience. Superannuation will be under U.S.S. conditions.

Further particulars about the post may be obtained from the Academic Registrar (LFG), University of Surrey, Guildford, Surrey GU2 5XH, or Tel.: Guildford 71281, ext. 452. Applications, together with the names and addresses of two referees, should be sent to the above by 29th September, 1978.

SURREY
THE UNIVERSITY
DEPARTMENT OF BIOCHEMISTRY

READER IN NUTRITION

Applications are invited for the position of Reader in Nutrition in the Department of Biochemistry. The person appointed will contribute to the undergraduate and postgraduate teaching within the Department and be responsible for the initiation and supervision of research.

Applicants must be graduates with a higher degree and a good research record. Preference will be given to those with an interest and experience in clinical nutrition. A medical qualification would be an additional recommendation.

Salary will be within the range £7,074 to £8,730 per annum according to qualifications and experience. Superannuation will be under U.S.S. conditions.

Further particulars about the post may be obtained from the Academic Registrar (LFG), University of Surrey, Guildford, Surrey GU2 5XH, or Tel.: 71281, ext. 452. Applications from men and women in the form of a curriculum vitae, together with names and addresses of three referees, should be sent to the above by 29th September, 1978.

Polytechnics

SHEFFIELD CITY POLYTECHNIC
DEPARTMENT OF COMMUNICATION STUDIES

Lecturer II in Communication Studies
(PSYCHOLOGY)

Salary Scale: £4,101-£6,558

Applicants should be well qualified in cognitive and/or developmental aspects of human psychology and interested in teaching in a developing multi-disciplinary department, with an established degree course in Communication Studies and a variety of other teaching and research activities. Requests for application forms in writing only please to the Recruitment Section of the Personnel Department, Sheffield City Polytechnic (Dept THES), Halfords House, Fitzalan Square, Sheffield S1 2BB. Completed forms should be returned by 29th September, 1978.

LEARNING RESOURCES
ASSISTANT GRAPHIC DESIGNER

£3,192-£5,334 p.a.

To take responsibility for the design of print materials for teaching/learning purposes and to assist in the design of learning materials in formats such as TV graphics, tape slide, OHP.

BA in Graphic Design or equivalent qualification plus at least two years relevant experience is desirable, but candidates without formal qualifications and at least five years studio experience will be considered.

Further details and application forms from Personnel Officer, Brighton Polytechnic, Moulsecoomb, Brighton BN2 4GJ. Tel: Brighton 693655, ext. 2536. Closing date 22nd September, 1978.

THE POLYTECHNIC HUDDERSFIELD

Department of Architecture

PRINCIPAL LECTURER
OR SENIOR LECTURER–ARCHITECTURE

Ref. ACA/199/B

Applications are invited from well-qualified architects. This is a new post requiring good practical experience combined with a willingness to undertake teaching experience. The successful candidate will have interest in Design, possibly other subjects and research.

Department of Behavioural Sciences

LECTURER II–SOCIAL WORK

(Part-time two-year contract) Ref. ACA/242

Applications are invited from professionally qualified graduates to contribute to the tutoring of CQSW students. The successful candidate will be involved in teaching social work methods and practice.

LECTURER II–SOCIOLOGY

(Part-time two-year contract) Ref. ACA/243

Applications are invited from good honours graduates with special interests in Sociological Theory and Modern Industrial Society.

Department of Building

SENIOR LECTURER OR LECTURER II–
QUANTITY SURVEYING

Ref. ACA/202/B

Applications are invited from persons possessing relevant qualifications with suitable professional experience, and be capable of lecturing to students of Building and Architecture on Certificate, Diploma and Degree courses. Some teaching experience is desirable, but not essential.

Department of Computer Studies and Mathematics

SENIOR LECTURER OR LECTURER II–
APPLIED STATISTICS

Ref. ACA/228/B

Applications are invited for the above post which is to support and develop the work of the Department in Statistics, which includes its BA(Hons) Computing in Business course and other statistics courses throughout the Polytechnic. Candidates should possess a good Honours Degree in Statistics or equivalent qualifications and experience.

Department of Geography and Geology

LECTURER II–GEOGRAPHY

Ref. ACA/228

Applications are invited from good Honours Graduates to teach introductory courses in Human Geography, Hostel in practical classes and have a special interest in regional analysis and quantitative methods. Staff are expected to undertake activities, including research in addition to teaching duties.

Salary : PL £7,047 to £7,818 (bar) to £8,844 per annum
SL £8,061 to £7,065 (bar) to £7,572 per annum
LII £4,101 to £6,558 per annum

Further details and application forms, which should be returned by September 29, 1978, from the Establishment Office, The Polytechnic, Queensgate, Huddersfield HD1 3DH. Telephone 0484 22288, ext. 2226.

KINGSTON POLYTECHNIC

School of Electronic Engineering and Computer Science

LECTURER II/SENIOR LECTURER IN DIGITAL ELECTRONICS AND SYSTEMS

Candidates should be highly qualified with appropriate postgraduate and/or industrial experience. The successful applicant will be expected to teach digital electronics and systems to electronic engineers and computer scientists, and a thorough knowledge of microprocessors, and micro- and mini-computer operation would be an advantage.

He/she will be expected to set up a research programme and the post, which is available immediately, offers substantial opportunity for initiative and drive. Salary within range £4,101 to £7,572 inc.

Further details and application forms (to be returned by September 29, 1978) from Academic Registry, Dept. AO, Kingston Polytechnic, Penrhyn Road, Kingston upon Thames KT1 2EE, 01 549 1366.

ULSTER POLYTECHNIC

Faculty of Technology

School of Maritime Studies

LECTURER II/SENIOR LECTURER—STRUCTURES

Applications are invited from suitably qualified graduates for the above post in the School of Maritime Studies. The person appointed will be expected to develop expertise in the growth field of design and analysis of marine structures.

LECTURER II—NAVIGATION

To teach nautical science subjects at various levels in the School of Maritime Studies.

School of Building

LECTURER II— BUILDING TECHNOLOGY

Applicants should have a knowledge and understanding of the principles, factors and requirements which influence the design and construction of buildings together with a modern approach to the practical production and construction processes involved and be graduates or a member of a professional institution associated with the construction industry.

School of Mechanical & Industrial Engineering

LECTURER II— SYSTEMS & CONTROL

In addition to a broad knowledge of Mechanical Engineering, the person appointed will have expertise in the fields of Systems and Control. He/she will contribute to teaching, research and curriculum development at degree and post-graduate level in this field. A Chartered Engineer will be preferred.

Faculty of Education

VISITING LECTURER—EDUCATION

(COMMUNICATION STUDIES)
One Year Appointment

Applications are invited from teachers and others interested in the development of Communication Studies in Secondary Schools. There will be opportunities for teaching, research and programme planning in this expanding area.

Salary Scales : SENIOR LECTURER £6,051-£7,065/£7,572
LECTURER II £4,101-£6,558
LECTURER I £3,192-£3,534
VISITING LECTURER £4,101-£6,558

The Polytechnic is a direct grant institution with an independent Board of Governors. It opened in 1971 and now has a student population of some 7,100. It has extensive new purpose-built accommodation, including 750 residential places on the 114-acre campus overlooking the sea at Jordanstown, a pleasant and quiet residential area. There is a scheme of assistance with removal.

Further particulars and application forms, which must be returned by September 25 except Post 3 which is by October 2, may be obtained by telephoning Whitenabbey (0231) 65131, ext. 2243, or by writing to : The Establishment Officer, Ulster Polytechnic, Shore Road, Newtownabbey, Co Antrim BT37 0QB.

KINGSTON POLYTECHNIC

Applications are invited from suitable qualified candidates for the post of

COMPUTER UNIT DIRECTOR

Burnham HoD grade V £8,940-£9,900 inclusive

Write for further details and application forms (to be returned by 5th October, 1978) to the Academic Registry, Dept. AO, Kingston Polytechnic, Penrhyn Road, Kingston upon Thames KT1 2EE.

Middlesex Polytechnic Library Services

Technical Services Librarian

Salary within the Principal Lecturer range :
£7,344-£9,141 p.a. inc.

An academic appointment to develop and implement new management and information systems in support of a wide range of library and learning resources services.

The appointee must have substantial interest in and understanding of librarianship, information science and higher education, should be academically well qualified and hold appropriate professional qualifications. Previous experience of automated systems is essential.

Please write for full details and an application form : The Appointments Officer (ref A6798), Middlesex Polytechnic, Bounds Green Road, London N11 2NQ. Closing date September 18.

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CITY OF LONDON
THE POLYTECHNIC
ASSISTANT ADMISSIONS OFFICER

Applications are invited for the post of Assistant Admissions Officer to a more senior post in another Polytechnic.

Preference will be given to candidates with suitable experience in Higher Education, but those who have had supervisory responsibility in other fields will be considered. An interesting challenge for someone with initiative, enthusiasm and the ability to work with a small team. There will be considerable staff contact with academic staff.

Salary up to £4,669 starting point dependent on qualifications and experience.

Further details of the post may be obtained from the Assistant Secretary, The Polytechnic, 29 Tabard Street, London SE1 4LA, to whom applications should be returned by 30th September, 1978.

Applications are invited for the following posts :

Faculty of Art and Design—Greengate House Annexe Plaistow, E13

Principal Lecturer in Fashion

Required as Course Tutor for the Polytechnic Diploma in Fashion Textile design. This successful applicant will be required to lead a team responsible for the development of a sandwich degree course in Fashion, Design and Marketing and for the design submissions for validation. Experience in the fashion industry and in design education at an appropriate level is essential. (Ref. S/AO 323A)

Faculty of Business—Barking Precinct
Department of Accounting and Finance

Lecturer II in Behavioural Science

Graduate Behavioural Scientist to teach primarily on an Accountancy and Finance Degree. Applicants should be graduates with a knowledge of the field of organisational behaviour and preferably psychology of industry. A post-graduate qualification is desirable. An interest in the behavioural and organisational implications of accounting systems would be advantageous. (Ref. S/AO 323B)

Faculty of Environmental Studies—Waltham Forest Precinct
Department of General Surveying and Construction

Lecturer II in Valuation Studies

To teach at degree level, professional subjects in the discipline of Land Administration. Applicants will be expected to concentrate their teaching in Valuation Studies and Property Taxation and should have had recent experience in these areas in either the public or private sector of the profession. Candidates should have an appropriate degree and/or professional qualification. (Ref. S/AO 323C)

Faculty of Science—West Ham Precinct
Department of Mathematics

Lecturer II/Senior Lecturer in Statistics or Operational Research

Candidates should have a good first degree and a higher degree in a branch of statistics or operational research with research interests in a pure or applied field. Interests in business or management science preferred. (Ref. S/AO 323D)

Department of Paramedical Sciences

Lecturer II in Microbiology with special Interest in Food Microbiology

To teach General Microbiology and Food Science or Food Technology or Food Microbiology on a number of Faculty Courses. (Temporary post available vice permanent appointment with effect from 1.9.78) (Ref. S/AO 323E)

Department of Student Services—Barking Precinct

Student Counsellor—Lecturer II

Psychologist, or similarly qualified graduate to work for the Counselling and Careers Service on personal counselling ; personal growth counselling within the careers context, and academic skills training. (Ref. S/AO 323F)

Academic Personnel Office

Deputy Academic Personnel Officer

A unique opportunity exists to join a small team of staff engaged on academic personnel administration in a large and progressive Polytechnic. Applicants should preferably be graduates or professionally qualified and/or possess some previous personnel experience. (Ref. S/AO 323G)

Salary Scales :
Principal Lecturer: £7,047-£8,844 per annum
Senior Lecturer: £6,051-£7,572 per annum
Lecturer II: £4,101-£6,558 per annum (plus applicable London Allowance)

Deputy Academic Personnel Officer : £5,058-£5,853 inclusive

Further details and application form from : The Senior Academic Personnel Officer (2), North East London Polytechnic, Forest Road London E17 4JB. Telephone : 01-527 2272 (Extension 20). Closing date : 22nd September, 1978.

NELP North East London Polytechnic

KINGSTON POLYTECHNIC

Learning Resources

EDUCATIONAL AIDS OFFICER

This is a new post created to co-ordinate the administration of AVA, CCTV and photographic services. A wide range of experience with expertise in at least one area is expected. Familiarity with the demands of an education environment essential.
SO2 grade £5,286 to £6,345 inc.

Details and application forms from Assistant Registrar, Kingston Polytechnic, Penrhyn Road, Kingston upon Thames KT1 2EE. 01-549 1366.

CITY OF BIRMINGHAM

POLYTECHNIC LIBRARY

TUTOR LIBRARIAN

To be responsible for the Art and Design, Margaret Street, Library of the Polytechnic.

Salary scale : Lecturer II, £4,101 to £6,558.

Further details and application forms may be obtained by telephoning the Personnel Officer (1753) 50501 ext. 2, or by writing to the Personnel Officer, Slough College of Higher Education, Wellington Street, Slough, Berkshire SL1 1YG. Closing date 20th September, 1978.

LEICESTER
THE POLYTECHNIC

SENIOR EDUCATIONAL MEDIA DESIGN TECHNICIAN

£3,708 to £4,668 per annum inclusive of supplement

Required in the Production Unit of the Learning Resources Centre for running a Media Production Unit, with a range of teachers to produce excellent educational media and aptitude in graphic design is essential. As it engages in Further and Higher Education.

Further details and application form available from Staffing Officer, The Polytechnic, Leicester LE1 9BH. Telephone (0533) 60181 Extension 2350.

oxford polytechnic

Department of Construction

Lecturer–Senior Lecturer in Engineering Geology

(Salary £4,101—(bar)—£7,572)

Applications are invited from those with suitable qualifications and experience to teach basic geology for engineers, engineering geology and hydrology to degree and higher diploma students in Civil Engineering Construction. We also require assistance with basic courses in geotechnics and geology and the teaching of applied aspects of geology in other Polytechnic courses.

Applications, including the names of referees, should be returned by September 18 to the Dean of the Faculty of Technology, Oxford Polytechnic, Oxford OX3 0BP, from whom further particulars and application forms may be obtained.

THE POLYTECHNIC OF WALES
POLUTECHNIG CYMRU

Applications are invited for the post of:

Senior Administrative Assistant

Academic Division

Salary: £3,933-£4,320 per annum plus £312 per annum non-consolidated supplement. (Grade AP IV).

To be responsible for the supervision of clerical and administrative staff within the Academic Division, with specific responsibility for statistical returns.

Applicants should hold a degree and/or a professional qualification, and have relevant experience, preferably in an institute of Higher Education.

Further particulars and application forms (returnable by 15th September, 1978) are obtainable from :

The Personnel Officer,
The Polytechnic of Wales,
Pontypridd
Tel. (0443) 4055133

PLYMOUTH POLYTECHNIC

Learning Resources Centre

CHIEF CATALOGUER

Salary : £4,461-£4,761 (+ £312 p.a. supplement)

This new post has been established at a time when changes in automated systems are being planned, and offers challenge and demand. Applicants must be professionally qualified graduates with good cataloguing experience preferably with automated systems at large academic library.

Application forms, to be returned by Friday, 29th September, 1978, can be obtained with further particulars from the Personnel Officer, Plymouth Polytechnic, Drake Circus, Plymouth, PL4 8AA.

PLYMOUTH POLYTECHNIC

School of Environmental Sciences

TEMPORARY LECTURER II ANIMAL PHYSIOLOGY

A graduate Physiologist, preferably with a particular interest in Fish Physiology, to assist in teaching at post and undergraduate level during the Autumn Term 1978, and probably the Spring Term 1979.

Salary will be pro rata on the scale £4,101 to £6,558.

Application forms to be returned by Friday, 29th September, 1978, can be obtained from the Personnel Officer, Plymouth Polytechnic, Drake Circus, Plymouth, PL4 8AA.

LEICESTER
THE POLYTECHNIC

FACULTY OF BUSINESS

Applications are invited for the following posts:

SCHOOL OF ECONOMICS AND ACCOUNTING

TEMPORARY LECTURER II IN ECONOMICS
(Post number 5460)

Required for two years to commence as soon as possible.

SCHOOL OF MATHEMATICS COMPUTING AND STATISTICS

LECTURER II IN OPERATIONS RESEARCH
(Post number 5097)

Required to teach Operations Research and some Statistics at all levels for Maths Degrees. Experience should have an emphasis in areas such as business, commerce, manufacturing.

LECTURER II/SENIOR LECTURER IN DATA PROCESSING
(Post numbers 5360 and 5424)

Candidates should have experience in programming and systems analysis in business environment. Knowledge of microprocessors would be advantageous.

Salary, for posts 5460 and 5097: £4,101 to £6,558 per annum. Salary for posts 5360 and 5424: £4,101 to £7,065 per annum.

Further details and application forms available from Personnel Officer, The Polytechnic, Leicester LE1 9BH. Telephone (0533) 60181 Extension 2350.

MANCHESTER
THE POLYTECHNIC
FACULTY OF MANAGEMENT AND HUMANITIES
DEPARTMENT OF ACCOUNTANCY AND FINANCE

Lecturer II in Accountancy (ref. 5/78) to teach on degree and professional courses in accountancy and one of those of the following specialisms—
Accounting Theory
Financial and Management Accounting
Public Finance
Legal Aspects of Accounting.
Candidates should be graduates, ideally qualified and/or be working for a professional examination.
Salary scale £4,101 to £6,558.
For further particulars and application form (returnable by 29th September, 1978) please send a stamped addressed foolscap envelope to the Staffing Officer, Manchester Polytechnic, All Saints, Manchester M15 6BH.

Adult Education

OXFORD
BROOKE COLLEGE

Invites applications from persons with initial academic qualifications and suitable theory, design and experience of adult and trade union education for the post of principal tutor-organiser in Oxford. Salary on the scale £5,301 to £6,936 per annum.

For further particulars and application form (returnable by 29th September, 1978) please send a stamped addressed envelope marked "Principal Tutor-Organiser" to the Secretary, Brooke College, Oxford, Cumnor Hill, Oxford OX2 9PP.

Applications from persons with suitable qualifications and experience in adult education and trade union education for the post of Principal Tutor-Organiser in Oxford. Salary on the scale £5,301 to £6,936 per annum. Further particulars and application form (returnable by 29th September, 1978) from the Secretary, Brooke College, Oxford, Cumnor Hill, Oxford OX2 9PP.

Announcements

FOUR-WEEK INTENSIVE COURSES

AT BROOKSIDE COLLEGE, CAMBRIDGE

Brookside College will be holding the following four-week courses commencing October 2nd and November 6th.

(1) Training Courses in the Teaching of English as a Foreign Language. This course gives equal emphasis to both the theoretical and the practical aspects of teaching foreign students at levels ranging from elementary to advanced, and includes the teaching of examination techniques.

(2) Modern English Literature. This course will consist of lectures and seminars and, as well as focusing on the major work of the first half of the twentieth century, will give considerable emphasis to the literature of the period 1945 to the present day.

Both courses will conclude with optional examinations. Students successful in these examinations will be awarded appropriate certificates. The two courses may be combined for a composite (reduced) fee. For further details write to :

The Vice Principal,
Brookside College,
3 Brookside, Cambridge. Tel. 0223 64639

Fellowships and Studentships

SCIENCE RESEARCH COUNCIL

FELLOWSHIPS and OVERSEAS (NATO) FELLOWSHIPS AND STUDENTSHIPS

Applications for SRC Fellowships and Overseas (NATO) Fellowships and Studentships commencing in 1979 should be made to the Science Research Council, PO Box 18, Swindon SN2 1ET.

For application forms telephone : Swindon (0793) 26222 Ext. 2172.

Closing dates for applications

Senior Fellowships : November 30, 1978
Advanced Fellowships : September 30, 1978
Postdoctoral Fellowships : January 31, 1979
Industrial Visiting Fellowships : Apply at any time
Overseas (NATO) Fellowships :
In Europe : February 1, 1979, and June 1, 1979
Outside Europe : January 31, 1979
Overseas (NATO) Studentships : January 31, 1979

THE SCIENCE RESEARCH COUNCIL

CASE STUDENTSHIPS EXTENSION OF CLOSING DATE

A number of SRC CASE research studentship projects remain unfilled and as a result the Council is now prepared to accept nominations of eligible students until December 31, 1978, compared with the usual date of July 31. Work on the projects may be started at any convenient date up to March 31, 1979.

CASE awards are normally tenable for up to 3 years and involve working on a PhD-level project at an academic institution in close collaboration with an industrial concern, at whose laboratories a considerable period will be usually spent. Full details of vacant projects, eligibility requirements and the value of awards can be obtained from :

Mr. A. W. Rendell, Research and Training Support Section, Science Research Council, P.O. Box 18, North Star Avenue, Swindon SN2 1ET, Wilts. Tel : 0793 26222, ext. 2138.

(Supervisors of projects are advised that the Categories A and B will be suspended for the purpose of this exercise).

LADY DAVIS FELLOWSHIP TRUST
P.O. BOX 1255, Jerusalem, Israel

FELLOWSHIPS FOR STUDY AND/OR RESEARCH AT GRADUATE OR POST-DOCTORAL LEVELS AND VISITING PROFESSORSHIPS
in 1979-80
at the Hebrew University of Jerusalem and at the Technion—Israel Institute of Technology, Haifa

GRADUATE AND POST-DOCTORAL FELLOWSHIPS

Eligibility : Lady Davis Fellows will be selected on the basis of demonstrated excellence in their studies, promise of distinction in their chosen fields of specialization and qualities of mind, intellect and character.

Post-doctoral candidates shall have completed their doctoral dissertation before arrival in Israel.

The Graduate and Post-doctoral Fellowships are tenable for a period of one year. They may be renewed for a second year and in special circumstances extended for a third year. The grant is intended to defray the cost of the Fellow's travel and tuition fees and to meet reasonable living expenses.

Application : Graduate candidates may apply during their senior academic year or after they have undertaken study in a graduate school. Post-doctoral candidates may apply at an early stage of their professional career (not later than 3 years after completion of their doctoral dissertation).

Graduate and Post-doctoral candidates (including Israelis abroad) may obtain application forms from the Lady Davis Fellowship Trust at the above address, after they indicate the category of Fellowship for which they are eligible.

Completed applications must reach the office of the Trust not later than January 1, 1979.

VISITING PROFESSORSHIPS

These Fellowships are intended for candidates with the rank of Full or Associate Professor at their own institution. They are tenable for periods from one trimester (or semester) to a year.

Application : Forms may be obtained from the Lady Davis Fellowship Trust at the above address. Completed application forms for the Hebrew University must reach the office of the Trust by November 30, 1978. Those for the Technion—by December 31, 1978.

Colleges and Departments of Art

DUNCAN OF JORDANSTONE COLLEGE OF ART

Applications are invited for the undernoted appointment in the School of Home Economics, Catering and Institutional Management :

Lecturer A in Accommodation Studies

Applicants should hold a Degree/Higher National Diploma in Institutional Management, Industrial experience is desirable.

The work will involve the responsibility for the development of Accommodation Studies in the Higher National Diploma Courses in Catering and Hotelkeeping and Institutional Management.

The salary scale is £4,056 to £7,698 per annum. Further details and application forms may be obtained from the Secretary, Duncan of Jordanstone College of Art, 13 Perth Road, Dundee DD1 4HT (Telephone 0382/23281, ext. 6), to whom applications should be returned by September 29, 1978.

LEICESTERSHIRE

LOUGHBOROUGH COLLEGE OF ART AND DESIGN

Part-time LECTURERS required to teach the Art degree students.

(a) PRINTMAKING — Fridays, 6 hours per week.

(b) SCULPTURE — Thursdays, 3 hours per week.

Rate of pay £6.70 per hour, second class travelling expenses over 8 miles. Prospect of well above basic rate. Applicants must be practising artists and applications are required giving full details of age, qualifications, etc.

Applications to be sent to the Principal, Loughborough College of Art, Radmoor, Loughborough, Leics., as soon as possible.

LONDON, S.W.7

ROYAL COLLEGE OF ART

SCHOOL OF TEXTILE DESIGN

Applications are invited from persons with wide experience of textiles including weave technology and with proven organisational ability for the post of full-time SENIOR LECTURER in charge of the Weaving, Printing, Knitting and Tapestry work within the school.

The starting salary will be within the range £7,734 to £9,180 per annum according to qualifications and experience.

Further details and application form for this appointment can be obtained from the Assistant Registrar (Staff), Royal College of Art, Kensington Gore, London SW7 2EU.

Fellowships and Studentships continued

LONDON, N.5

THE POLYTECHNIC OF NORTH LONDON

DEPARTMENT OF APPLIED SOCIAL STUDIES

TWO RESEARCH POSTS in PSYCHOSOCIAL ASPECTS of ADVENTITIOUS HEARING LOSS

Applications are invited for two posts, one of Research Assistant and the other of Research Fellow/Research Assistant, each to work mainly on one of two projects in:
(a) Psychosocial implications of the severe hearing loss funded by the Medical Research Council.
(b) Mental health and hearing loss among elderly people living at home, funded by the Nuffield Foundation.
He/she should be a graduate or equivalent in a relevant discipline.
For appointment at the Fellowship level, research experience and/or considerable professional expertise are essential.
Salary scales: Research Assistant: £5,055 to £5,787; Research Fellow: £5,349 to £6,603 (inclusive of London Allowance).
Application forms and further details from the Secretary, Department of Applied Social Studies, The Polytechnic of North London, Ladbroke House, Highbury Grove, London N5 2AD.
Closing date: 21st September. Informal inquiries to Alan Thomas or Anne Hales, London 01-607 2789, Ext. 2002.

ISRAEL

THE HEBREW UNIVERSITY OF JERUSALEM Jerusalem

The Hebrew University of Jerusalem offers a small number of post-doctoral FELLOWSHIPS for the 1979-80 academic year in the HUMANITIES, SOCIAL SCIENCES, NATURAL SCIENCES, AGRICULTURE and MEDICINE.
Candidates may apply at an early stage of their professional career (but later than three years after completion of their doctoral dissertation) to P.O. Box 1255, Jerusalem, Israel.
Completed application forms must be returned by December 31, 1978.

Colleges and Institutes of Technology

SANDWELL

(Metropolitan Borough of)

EDUCATION COMMITTEE

WEST BROMWICH COLLEGE OF COMMERCE AND TECHNOLOGY

VICE-PRINCIPAL

Salary £11,214 p.a.

Applications are invited for the post of Vice-Principal at this 6-form entry college. The college is on two sites and has also premises at Smethwick and Oldbury.
For further particulars (S.A.P. 3) please write to the Principal, West Bromwich College of Commerce and Technology, Dartmouth Road South, Wednesbury, West Midlands WS10 0PE.

Librarians

LANCHESTER POLYTECHNIC
Coventry-Rugby

LIBRARY

Subject Librarian (Engineering Post L.12
£4,773-£5,568 or £5,727-£6,680
Required a graduate chartered librarian, preferably with a background in applied technology, and experience in an academic library allied to a creative approach.

Acquisitions Librarian Post L.33
£4,345-£5,073 or £5,232-£6,088
Required a graduate chartered librarian with an interest in systems development whose academic background will enable him/her to contribute as a subject librarian in applied science, engineering or the social sciences.

Assistant Subject Librarian (Applied Sciences) Post L.18
£3,732-£4,632 or £4,773-£5,073
Required a graduate chartered librarian with a background in physics, chemistry or mathematics, some experience in an academic/research library preferred.

Issue Counter Superintendent Post L.30
£3,732-£4,632 or £4,773-£5,073
Required a qualified librarian or non-qualified person with considerable supervisory experience in a modern library, interest/experience in automated issue systems, capable of managing staff.

- Vacancies due to impending major development of the library—good career prospects.
- Good working conditions in new purpose built library on the compact Polytechnic site in central Coventry.
- Removal expenses up to £650 can be paid.

Please send stamped addressed envelope for full job specification and forms from G. A. White, Personnel Officer, Lanchester Polytechnic, Priory Street, Coventry. Tel. 24166 Ext. 303 (please quote post reference). Closing date for applications 20th September, 1978.

Colleges and Institutes of Technology continued

PAISLEY COLLEGE

DEPARTMENT OF CIVIL ENGINEERING

TEMPORARY LECTURER

We are looking for a person who has experience in Surveying and Photogrammetry and is keen to join a well equipped, forward thinking department. An additional interest in Highway Engineering would be an advantage. Teaching is done at undergraduate level and an interest in research would be actively encouraged.
The post is tenable for two years.
Salary scale—Lecturer 'A'—£4,056 to £7,698 p.a.
Application forms and further particulars from Establishment Section, Paisley College of Technology, High Street, Paisley PA1 2BE, quoting ref. THES/23/1. Closing date Friday, 22nd September, 1978.

REMINDER

COPY FOR CLASSIFIED ADVERTISEMENTS IN THE T.H.E.S. SHOULD ARRIVE NOT LATER THAN 10.30 a.m. MONDAY PRECEDING THE DATE OF PUBLICATION

Colleges of Further Education continued

BRENT

(Borough of)
KILBURN POLYTECHNIC
Priory Park Road, London NW6 7XB
Tel: 01-459 0505
HEAD OF DEPARTMENT OF BUSINESS AND PROFESSIONAL STUDIES
Tiverton Group VI
Required 1st January, 1979.
Applications are invited for the post which heads a department with three main areas of work:
(1) Certified Accountancy—full-time and part-time, but mainly the former.
(2) National Awards in Business Studies and Public Administration likely to become H.N.C. courses.
(3) Secretarial and Office Studies.
Applicants must be graduates, with significant managerial experience in higher and further education and/or industry or commerce. To be teachers.
Salary: £10,245 to £10,935 per annum plus Inner London Allowance of £462 (this latter figure is subject to current negotiation).
Further particulars and application forms (B.A.E.) to be returned by September 22nd, may be obtained from the Personal Assistant.
Relocation assistance available, subject to approval, exists.

Miscellaneous

Editors for careers publications

Haymarket Publishing Ltd is seeking two editors for its well established range of career publications which include *Directory of Opportunities for Graduates, Careers* and *Which Degrees*.
Haymarket is a highly successful periodical publishing house with a substantial list of titles catering for interests in careers, business, medicine and leisure. Some of its best known magazines include *Managers and Today, What Car, MBM, In Person* and *Campaign*.
The functions of the editors in the Careers Division include the updating of the editorial content of the directories each year (with the exception of *Which Degrees*) together with commissioning of appropriate new material and editorial production. The editors are also required to explore new subject areas and developments and to maintain close contact with employers, careers services and educational establishments.
The two posts offered are for (a) graduate publications and (b) school leaver publications. Candidates should have a knowledge of, and interest in, the problems of career choice which face students at either level together with an understanding of employers' recruitment procedures. They should be aged 29-35 and have a journalistic aptitude which can be demonstrated by previous written work. Salary is negotiable.
Please apply in writing with full c.v. to: Sue Pullan, Publisher, Careers Division, Haymarket Publishing Ltd., 34-42 Regent Street, London W1A 4YJ.

PAISLEY COLLEGE
COMPUTER CENTRE

Development Officer
(Computer Assisted Learning)

Applications are invited from persons with a sound mathematical background and a good working knowledge of FORTRAN programming for the above post tenable for a period of three years.
The successful candidate will be responsible for the extension of existing CAL packages and the development of new material.
Salary—£4,578 to £6,636.
Further particulars and forms of application can be obtained from the Establishment Section, Paisley College of Technology, High Street, Paisley, Renfrewshire PA1 2BE. Please quote ref. THES/30/1. Closing date Friday, 22nd September, 1978.

Bolton Institute of Technology
Electrical Engineering Department

SENIOR LECTURER

Applications are invited for the appointment of a Senior Lecturer in the Department of Electrical Engineering.
Applicants will be required to have graduate qualifications acceptable for Chartered Status and industrial experience relevant to the work in the Department. An interest in, and experience of, Digital Systems Engineering would be an advantage.
The Department has a healthy full-time C.N.A.A. Degree and Honours Degree and parallel Higher Diploma and Associateship courses in Electronic Engineering, Specialisms are Electronics, Communication Systems, Control Systems and Digital Systems; Research work in these fields is encouraged.
Initial salary will be dependent upon qualifications and experience and will be within the scale:
£5,094-£7,803 (Bar at £7,097)
Application forms and further particulars may be obtained from the Principal, Bolton Institute of Technology, Deane Road, Bolton, BL3 5AB, to whom completed forms should be returned by 22 September, 1978.

WEST GLAMORGAN County Council

Applications are invited from suitably qualified persons for the following posts in the Authority's Further Education Service to commence as soon as can be arranged.

DISTRICT 1 (SWANSEA WEST) APPOINTMENTS (Mr. A. D. Peacock, District Education Officer, Princess House, Princess Way, Swansea)

SWANSEA COLLEGE OF FURTHER EDUCATION

Lecturer Grade 1 in Electrical Engineering

To teach electrical installation and regulations practice and theory to students following City and Guilds 23 Electrical Installation Work, C.I.T.B. Integrated Training and E.I.T.B. Integrated (Electrical Bias) Courses. Applicants should have qualifications appropriate to the teaching requirements of the post and considerable experience in electrical installation work.
Salary Range: £3,192-£5,334 p.a. (Post Ref. FSC/10.23.78).

DISTRICT 3 (GORSEINON) APPOINTMENTS (Mr. D. V. A. John, Acting District Education Officer, 42 Lime Street, Gorseinon, Swansea).

GORSEINON COLLEGE OF FURTHER EDUCATION

Lecturer Grade 1 in Electrical Engineering

To teach on a range of electrical craft courses including colliery electricians and integrated training. The successful candidate will have had a sound background of electrical experience in the coal mining industry and should be qualified to at least H.N.C. standard. Teaching experience would be an added advantage.
Salary Range: £3,192-£5,334 p.a. (Post Ref. FGC/11.23.78).

Lecturer Grade 1 in Mechanical/Production Engineering

To teach craft theory and practice to students on City and Guilds 200 Series Courses and mechanical engineering mining craft courses. Experience in the mining industry is essential and a practical knowledge of pneumatics and/or industrial hydraulics would be an advantage. Applicants should possess at least H.N.C. and teaching experience is desirable.
Salary Range: £3,192-£5,334 p.a. (Post Ref. FGC/12.23.78).

Lecturer Grade 1 in Engineering

To teach on a range of engineering craft courses. Applicants should possess at least H.N.C. and teaching experience is desirable. Industrial experience is essential and a sound knowledge of the steel industry would be an added advantage.
Salary Range: £3,192-£5,334 p.a. (Post Ref. FGC/13.23.78).

DISTRICT 5 (NEATH) APPOINTMENTS (Mr. B. Tashara, District Education Officer, Cadoxton Road, Neath).

NEATH TECHNICAL COLLEGE

Lecturer Grade 1 in Brickwork

To teach mainly to Standard Scheme and Craft Certificate Apprentices. Applicants must possess an Advanced Craft Certificate in Brickwork plus a Full Technological Certificate. Possession of an H.N.C. in Building would be an advantage. This is a temporary post and will be for one year in the first instance.
Salary Range: £3,192-£5,334 p.a. (Post Ref. FNT/14.23.78).

Lecturer Grade 1 in Carpentry

To teach mainly to Standard Scheme and Craft Certificate Apprentices. Applicants must possess an Advanced Craft Certificate in Carpentry and Joinery plus a Full Technological Certificate. Possession of an H.N.C. in Building would be an advantage. This is a temporary post and will be for one year in the first instance.
Salary Range: £3,192-£5,334 p.a. (Post Ref. FNT/15.23.78).

Application forms and further particulars of specific posts are available from the addresses shown on receipt of a stamped addressed foolscap envelope(s) quoting the appropriate post reference(s).
CLOSING DATE. The closing date for the receipt of completed application forms is THURSDAY, 21st SEPTEMBER, 1978.

John Beale,
Director of Education.

Colleges of Higher Education

THE NATIONAL INSTITUTE FOR HIGHER EDUCATION, LIMERICK, IRELAND

The first phase of development of the river-side campus was officially opened in 1977. An extensive range of advanced facilities, provided as part of a World Bank project, permits the expansion of existing activities. The current National Diploma, Pass and Honours Degree programmes are being expanded and a variety of new programmes introduced at undergraduate, post graduate and post experience levels.

LECTURER, CONTROL SYSTEMS TECHNOLOGY

The post will be responsible for teaching and research work in the general electronics area, but with special reference to modern control systems, including digital methods and optimization. The minimum qualification is an honours degree or equivalent qualification.

LECTURER, ELECTRONIC INSTRUMENTATION

The person appointed will conduct teaching and research activity in the general electronics area. Suitable experience with modern instrumentation systems would be an advantage.
The minimum qualification is an honours degree or equivalent qualification.

LECTURER AND ASSISTANT LECTURER—MECHANICAL/PRODUCTION ENGINEERING

Those appointed will be involved in the development and implementation of programmes in the areas of mechanical and production engineering to diploma and degree level and will be expected to contribute to teaching basic engineering topics such as—engineering science; mechanics; thermodynamics; engineering drawing and production technology.
The minimum qualifications are Honours Degree or equivalent appropriate qualification together with industrial and/or teaching experience.

LECTURER/ASSISTANT LECTURER, POLITICS

The politics area is primarily concerned with contemporary Europe and with the implications of Ireland's European involvement. To this end the area focuses on the European Community as well as on the government and politics of European countries of relevance to Ireland. Courses in Irish politics, political sociology and international relations are also pursued.
It is expected that the person appointed will have specialist knowledge in one or more of these areas.
An appropriate post-graduate qualification is desirable.

ASSISTANT LECTURER, LAW

The area of legal studies provides modules for the programmes in European Studies, Public Administration, Regional Studies, and Business Studies. The person appointed will be expected to teach law modules within the area of European community law, constitutional, administrative, commercial and company law. He or she will also be expected to contribute to the development of legal studies within the Institute.
An appropriate post-graduate qualification is desirable.

ASSISTANT LECTURER, ECONOMICS (TEMPORARY)

Applications are invited for this post in the Business Studies Department.
The Department is responsible for courses at National Certificate, Haymarket is a highly successful periodical pub- Diploma and Degree levels.
Person appointed will be concerned mainly with teaching and assessment work in introductory and intermediate Economics to students on the Institute programmes. An interest in Business Economics or European Economics would be an advantage.
This appointment is for a 12-15 month period.
The minimum qualification is an honours degree or equivalent qualification.

TEACHING ASSISTANTS, BUSINESS STUDIES

Applications are invited for 2 posts as Teaching Assistants in Business Studies. Preference will be given to candidates who have specialised in any of the following areas: Economics, Marketing, Secretarial Practice or Business Policy.
Duties will consist of tutorial work in modules relevant to educational background or appointee, assistance in grading and assessment of students, the preparation of teaching material and some administrative responsibilities in the Business Studies Department.
A Teaching Assistant appointment is made on a 12-month non-pensionable basis. In exceptional circumstances this may be extended once by maximum additional 12 months.
The minimum qualification is a primary degree.
Salary: LECTURER £6,765-£8,694
ASSISTANT LECTURER £5,196-£6,663
TEACHING ASSISTANT £3,813 per 12-month contract
Application material available from the Personnel Office, The National Institute for Higher Education, Limerick, to be completed and returned by Friday, 6 October, 1978.

Ealing College of Higher Education — LONDON

Lecturer II in Educational Development

Applications are invited for the above post from graduates with a teaching qualification and significant experience in Further/Higher Education. The successful applicant is likely to have a background of Arts or Social Sciences. The Educational Development Unit is concerned with curriculum development, educational innovation and in-service training. A relevant higher qualification and experience in educational development work will be advantageous.

S.L/LII/LI in Accounting (2 posts)

Candidates should either have a first degree and preferably a post-graduate or professional qualification or be qualified and have industrial experience. They should be prepared to teach at undergraduate level and/or on professional courses.
Salary: S.L: £6,453 to (a possible maximum of) £7,974 p.a. inclusive
LII: £4,503 to £6,960 p.a. inclusive
LI: £3,594 to £5,736 p.a. inclusive
Further details and application form from The Chief Administrative Officer (TD/uc), Ealing College of Higher Education, St Mary's Road, London W5 5RF.
Closing date: 20 September, 1978.

Ealing — EDUCATION SERVICE

Cheshire

NORTH CHESHIRE COLLEGE
(of Further and Higher Education)

DEPUTY DIRECTOR
(re-advertisement)

The Padgate College of Higher Education, Warrington Technical College and the Warrington College of Art and Design will amalgamate in September, 1979, to become the North Cheshire College. The Director and Head of Administration of this provisionally graded Group 8 College of Further and Higher Education have been appointed. It is hoped to designate the senior management team of the new college with the addition of a Deputy Director in January, 1979, or shortly afterwards.
Applications already received in response to the original advertisement for this post in March, 1978, will receive further consideration. It is expected that the successful candidate will have had wide experience in higher education to enable him/her to contribute to the development of the degree and teacher training work of the college.
Salary £10,980 per annum.
Application forms and further particulars are obtainable from: Director of Education, Education Department, County Hall, Chester CH1 1SQ. Closing date: Monday, 2 October, 1978.

DURHAM COUNTY COUNCIL
NEW COLLEGE DURHAM
Faculty of Technology

Head of School of Mining

Applications are invited for the above post which carries the rank of Principal Lecturer from graduates (or persons of graduate equivalent status) in Mining Engineering with a First-Class Certificate of Competency and with relevant experience in the coal-mining industry and in teaching to at least H.N.C. level.
The Head of School is responsible to the Dean of Faculty for administration of the School which comprises 14 members of staff. Courses include Mining Technician Diploma and Technician and Higher Technician Certificates in Mining, Mining Electrical and Mining Mechanical. Duties could commence as soon as possible.
The College is an institution of Higher and Further Education and is a centre for advanced mining courses in the North East.
Further details and forms of application returnable by 22nd September, 1978, may be obtained from The Principal, New College Durham, Framwellgate Moor Centre, Durham, on receipt of a stamped addressed foolscap envelope.

Queen Margaret College
EDINBURGH

A Scottish Central Institution — Founded in 1875

LECTURER IN LINGUISTICS

Required for January, 1979, an Honours graduate with qualifications in Linguistics and Phonetics to make a major contribution to the teaching in the BSc Degree course in Speech Pathology and Therapy.
Salary Scale: £4,056-£7,167 (bar)—£7,698.
Application forms and further particulars from The Secretary, Queen Margaret College, Clerwood Terrace, Edinburgh EH12 8TS. Telephone 031-334 8111.

ROEHAMPTON INSTITUTE OF HIGHER EDUCATION
A federation of Digby Stuart, Froebel, Southlands and Whitelands Colleges

SENIOR LECTURER/LECTURER II IN ECONOMICS

Applicants should possess a higher degree in Economics and should be capable of teaching Economic Analysis and Applied Economics to Degree level. An interest in the History of Economic Thought and the History of the International Economy 1850-1939 would be an advantage as would be ability to teach some Accountancy.
Salary: Burnham FE Scale (£4,413-£6,870) plus London Allowance £402.
Appointment from 1 January, 1979.
Further details and application form from: The Academic Registrar, Roehampton Institute of Higher Education, Roehampton Lane, London SW15 5PJ. Telephone: 878 5751.
Closing date for receipt of applications 22 September, 1978.

Administration

Thames Polytechnic Students Union

ADMINISTRATIVE OFFICER

The Administrative Officer is the member of staff responsible for servicing Committees, Finance, Research and Staff Management.
An appreciation of Student Unions and some financial ability essential.
Salary (E.O.) £2,823-£4,881 (+£472 London Allowance).
Application forms (returnable by 26th September, 1978) from the Administrative Office.
Thames Polytechnic Students' Union
Thomas Street, Woolwich, SE18 6HU. 01-855 7559

Administration

CAMBRIDGE

THE UNIVERSITY

SECRETARY OF THE SCHOOL OF THE PHYSICAL SCIENCES

Applications are invited for the Secretaryship of the School of the Physical Sciences. The Secretary is Secretary to the Council of the School which has responsibility for the Faculties and Departments in the University concerned with the physical sciences. Professional knowledge of developments in the physical sciences would be regarded as an advantage.
Pensionable stipend £8,130 or, exceptionally £7,542.
Superannuation and equivalent benefits. Consideration will be given to the payment of removal expenses in appropriate circumstances.
The Development Officer will be based in Framingham Earl, the Norwich suburb.
Salary range: £6,201 to £8,730.
The appointment will be for an initial period of 5 years in an eminent young person likely to remain in post.
Application forms and further information about the appointment may be obtained from the Director, Institute of Development Studies, Sussex House, Falmer, Brighton, Sussex BN1 9RH, telephone 0273 606261, Ext. 252.
Closing date for receipt of applications: Friday September 22.

OXFORD

THE UNIVERSITY

APPOINTMENT OF AN ADMINISTRATIVE OFFICER

Applications are invited from graduates of the usual collegiate kind in the University Offices, with a view to the appointment of the answering to the Secretary for Appointments (£5,157 per annum), the salary to be reviewed on appointment (under review).
Further particulars and application forms from the Staff Records and Recruitment Officer, Miss Elaine Hunter, University of Sussex, Falmer, Brighton BN1 9QH, closing date 26th September 1978.

Courses

Language Tuition Centre

Recognised by The Department of Education and Science

L.T.C. Ladies' College of English and Secretarial Studies
Residential College for foreign students in EASTBOURNE SUSSEX.

L.T.C. School of English (in London)
English courses for foreign nationals. Intensive daily classes, part-time classes, or private lessons at all grades. Admission at any time. Language Laboratory. Preparation for Cambridge University Certificates. Courses continue throughout the Summer.

L.T.C. School of English and Further Education (in Norwich, Norfolk)
Intensive English and English combined with Business, Science, or Secretarial Studies. Courses for GCE "O" and "A" level examinations. Summer Courses. Family Accommodation.

L.T.C. Summer Schools
Residential Summer Courses in English for Foreign students, July and/or August at British Universities.

L.T.C. College of Secretarial and English Studies (in London)
Intensive one-year and two-year courses for foreign students commencing in September every year. Private accommodation arranged at School's own Residence in Kensington.

Please state which School or College is of interest when writing to, or telephoning:
The Director of Studies (TSS)
LANGUAGE TUITION CENTRE
28-32 OXFORD STREET, LONDON W1A 4DY
Telephone: 01-637 0681
Telex: 268312 LTC WESCOM G

STRATHCLYDE REGIONAL COUNCIL — DEPARTMENT OF EDUCATION

FURTHER EDUCATION

Applications are invited for the following posts at

Glasgow College of Technology, Cowcaddens Road, Glasgow G4 0BA

SENIOR LECTURER 'A' in PRODUCTION/OPERATIONS MANAGEMENT

Responsible for maintaining, developing and teaching courses in Production/Operations Management at undergraduate, post-graduate and post-experience levels. Applicants should be graduate with a relevant post-graduate qualification. Appropriate managerial experience in industrial or commercial organisations is essential. Teaching experience at post-experience level is particularly relevant.

SENIOR LECTURER 'A' in STATISTICS/OPERATIONAL RESEARCH

Good honours degree, preferably with a higher degree, and/or appropriate professional qualification in either statistics or operational research. Experience of the applications of mathematics in the modern business environment is desirable. The successful applicant will be expected to play an important role in the development of CNAA degrees within the college.

SENIOR LECTURER 'A' in MATHEMATHICS

Good honours degree in Mathematics with additional qualifications resulting from specialisation in an area of Mathematics or Statistics/Operational Research.

SENIOR LECTURER 'A' in MECHANICAL ENGINEERING

To develop research activities within a field of mechanical engineering such as Vibration Analysis, Stress Analysis, Structural Analysis, etc. A higher degree, degree teaching experience and a successful record of research will be expected,

LECTURERS 'A' in ECONOMICS

with a particular interest in industrial economics or macroeconomics or business finance. The successful candidates will be involved in teaching up to the level of honours degree and in the development of new degree courses.

LECTURER 'A' in MARKETING

To teach on Diploma and Degree Courses at undergraduate, post-graduate and post-experience levels. Applicants must be graduates preferably in Marketing. Relevant industrial or commercial experience is essential. Research and consultancy are encouraged.

LECTURER 'A' (Temporary) in PUBLIC ADMINISTRATION

To undertake teaching on Public Administration courses. Teaching and/or administration experience in a Developing Country would be desirable and a knowledge of financial procedures and other related themes would be advantageous. The appointment will be for one year initially with the possibility for further renewal.

LECTURER 'A' in PHYSICS

Honours degree in Physics. Post-graduate experience in physical electronics, acoustics or optics.

LECTURER 'A' in ELECTRONIC ENGINEERING

To teach electronic subjects, particularly digital electronics up to degree level. Preferably should hold a higher degree and be able to supervise research or conduct consultancy.

LECTURER 'A' in ELECTRICAL POWER ENGINEERING

To teach electrical power subjects, preferably including electrical machines or high voltage engineering, up to degree level. Preferably should hold a higher degree and be able to supervise research or conduct consultancy.
Teacher training would be an advantage but training can be given on an in-service basis.

Salary Scales :
Senior Lecturer 'A' £7,098-£7,899 Bar-£8,967
Lecturer 'A' £4,029-£7,110 Bar-£7,638

Placing on the salary scales will be given for relevant experience.
Forms of application and further particulars can be obtained from the College to whom completed application forms should be returned not later than September 22, 1978.

Edward Miller, Director of Education

School of Business & Social Studies

SENIOR LECTURER IN MANAGEMENT & APPLIED SOCIAL STUDIES

Applications are invited from candidates possessing a degree in Social Psychology and/or Applied Social Studies, with field experience in the Social Services and in experimental learning. Preference will be given to trained teachers.

An ability to additionally make a contribution to Organisation Theory would be an advantage.
The salary for this post will be in accordance with the Burnham Scales of Salaries, Senior Lecturer Grade :—

£6,051 to £7,065 (Bar) to £7,572

Application forms and further details are available from Staffing Officer, Bradford College, Great Horton Road, Bradford BD7 1AY, and completed forms should be returned not later than 22 September 1978.

Bradford College

General Vacancies

OXFORD

A SOCIAL SCIENTIST

with experience of research in the perinatal field is required for the newly-established National Perinatal Epidemiology Unit. The Unit's programme of work includes a number of elements for which the skills of a social scientist are required, particularly in the design, implementation and analysis of large surveys. The appointment, which will be for a three-year period, will be made within the salary range £6,750 to £7,506 p.a. (Research Grade Scale II).

Applications, including a curriculum vitae, copies of published work and the names of two referees, should be sent (research Institute, Churchill Hospital, Oxford OX3 7LJ, to arrive by September 22, 1978.

Personal

POSTALOANS UNSECURED

£50 to £1,500
RICHMOND INVESTMENTS LTD.
4 The Green, Richmond, Surrey. (0-940 9858/3929 est. 1053

Overseas

DIRECTOR
United Nations International School
Starting Sept. 1, 1979

To head an international school of 1,800 students and a faculty of 130 located in NY City.
The Director will be responsible for the overall administration of the school, including both academic and fiscal aspects.
The candidate must be experienced in international education; possess advanced academic qualifications; have proven academic, administrative and fiscal skills; be fluent in English and proficient in one other language. Salary commensurate with qualifications and experience. Term of contract three years with possible extension.
Address all inquiries and request for application to :—

The Search Committee
U.N.I.S. Board Office
Room 2541
United Nations
New York, NY 10017 USA

ST. ANN'S COLLEGE INC.
(affiliated with the University of Adelaide as a Residential College)

PRINCIPAL

The Council of the College invites applications for the above-mentioned position.
The College, which was opened in 1847, is situated within walking distance of the University of Adelaide. It is a residential College accommodating approximately 120 male and female students and tutors.
Remuneration will be in accordance with qualifications and experience. The Principal will be required to live within the College. Married quarters are available.
The successful applicant will be expected to take up duties in mid 1979.
Further information and application procedure is available from the Association of Commonwealth Universities (Appts.), 36 Gordon Square, London WC1H 0PF. Applications close on September 30, 1978.

General Vacancies

LONDON

AMNESTY INTERNATIONAL

requires RESEARCHER for the Middle East to investigate human rights situations and individual cases in the Middle East. Work involves preparing detailed biographies, background reports, providing missions and formulating policy. Candidates should have a special knowledge of and an interest in the area, its history and politics, and objective political judgment are essential, together with a background in raising academic standards. Fluent English and a knowledge of Arabic essential, knowledge of Farsi an asset. Salary £4,680 per annum, rising scale 6 October, 1978. Position will be based in London.

Application from Caroline Reeson, 10 Southampton Street, London WC2E 7HF. (tel. phone 01-836 7788, ext. 269.

STUDENT TEACHER WANTED

September, for 1 year. Worcester Prep. School. History, English, Games. [illegible]

AUSTRALIA

WARRNAMBOOL INSTITUTE OF ADVANCED EDUCATION

Warrnambool Institute of Advanced Education is a regional College located on the south-west coast of Victoria. It provides Degree and Diploma courses in Applied Science and Technology, Art and Design, Business Studies, General Studies (Social Science) and Teacher Education, together with a complementary range of Technical and Further Education courses. On-campus and external study is provided.

Head ~~of General Studies~~ (Social Science)

In Social Science, multidisciplinary courses leading to either Bachelors Degree or a Diploma are offered. Majors are Communication, Politics, Sociology and Economics, minors are Psychology and Geography.

QUALIFICATIONS:
Warrnambool Institute of Advanced Education seeks a person of outstanding academic achievement with a Higher Degree and applied experience in one or more of the Social Sciences taught in its multidisciplinary courses.

DUTIES:
To administer the Faculty of General Studies, to provide academic leadership by teaching, application, research and publication, to work in collaboration with other heads and staff for the total academic program of Warrnambool Institute of Advanced Education, to assist the Principal with certain college-wide functions.

SALARY:
A$29,614 per annum

APPLICATIONS:
Close Monday, 23 October 1978. Typewritten applications stating qualifications, experience, and giving sufficient information to indicate suitability for interview should be sent by airmail to the Staffing Officer, Warnambool Institute of Advanced Education, Box 423, Warrnambool, Victoria 3280, Australia.

Further information may also be obtained from the Staffing Officer. (Mark envelope Staffing/Confidential)

Warrnambool Institute of Advanced Education

CAVAL P.O. Box 137 Parkville, 3052, Australia

(COOPERATIVE ACTION BY VICTORIAN ACADEMIC LIBRARIES)

CAVAL, a body whose members are Victoria's tertiary educational institutions and the Library Council of Victoria, has established an agency to develop and implement programmes for fostering cooperation between their libraries and providing services to them, especially by the use of computer techniques. CAVAL is at present administered by a committee of management, the Committee on Library Cooperation, to which all staff are responsible.

Applications are invited for the position of

DIRECTOR

for a period of one or two years at a commencing salary of approximately $A27,000.
The duties of the Director will include
- managing the CAVAL agency for cooperative services
- leading the development of new projects
- maintaining existing projects
- coordination of CAVAL's activities with those of similar bodies
- advising the CAVAL committee of management.

Applicants should have some knowledge of library operations, administrative procedures, and the role of data processing; they should hold an appropriate tertiary qualification.

The appointee will be expected to take up duties in March, 1979, when the current Director completes his term of secondment from his parent institution. The period of initial appointment is open to negotiation.

Conditions of appointment will be similar to those applying in Australian Universities, and will include an allowance for removal expenses.

Further details can be obtained from:-
The Director,
CAVAL,
P.O. Box 137,
PARKVILLE, Vic. 3052,
Australia.

Applications, quoting the names of three referees, should be addressed to The Chairman, CAVAL, at the above address and arrive no later than October 6, 1978.

OVERSEAS TEACHING POSTS

LECTURER IN BRITISH SOCIAL HISTORY

(TUNISIA)

Faculte des Lettres et Science Humaines, University of Tunis. To prepare and teach English medium courses on rural England before the Industrial Revolution and the mass media in Britain, to direct a postgraduate seminar on British Civilisation and to participate in the improvement of the teaching of British history at the undergraduate level.

Candidates must be UK citizens and have PhD or MA in social history or a related field and at least three years' teaching experience, preferably at university level. Good knowledge of French or Arabic desirable. Salary : 400 dinars a month (approx £510 at current rates of exchange).

Benefits : Three months' leave in summer ; baggage allowance. Two year contract from January 1979 or earlier.
78 TU 106

TELECOMMUNICATIONS INSTRUCTORS

(ALGERIA)

Institute of Telecommunications, Oran. Instructors required to establish English-medium courses and teach student engineers and technicians in the following fields : Mathematics (4 posts), Physics (3 posts), Electronics (2 posts), Data Processing and Computer Structures (1 post), Signal and Communication Theory (1 post).

Candidates, preferably aged 25-35, should have PhD or BSc degree in the relevant subject and at least two years' teaching experience. Knowledge of French desirable (tuition may be available to those whose French is inadequate at present).

Salary : DA44,973 to 67,316 pa (£5,996 to £8,975 at current rates of exchange) according to qualifications and experience.

Benefits : One month's paid leave a year ; subsidised housing. Two year contract from January, 1979, renewable.
78 TO 169-179

LECTURER IN ENGLISH

(CONGO)

Institut National Superieur des Sciences de l'Education, Brazzaville. To teach English language, phonetics and methodology to students training to become teachers of English in lycees and middle schools. Candidates should have a first degree preferably in English or Modern Languages and a postgraduate qualification in TEFL and/or Applied Linguistics (preferably an MA). A minimum of three years' teaching experience and good knowledge of French also required.

Salary : £5,000 to £6,129 pa plus 10 per cent inducement.

Benefits : Overseas and children's allowances : free furnished accommodation. Two year KELT contract.
78 TT 14

SENIOR LECTURER IN ENGLISH

(CONGO)

Department of Modern Languages, Marien Ngouabi University, Brazzaville. To teach English Language and linguistics at undergraduate and postgraduate level and to supervise the running of the language laboratories.

Candidates should have a good honours degree in English, an MA in Applied Linguistics, English Studies or TEFL, five years' teaching experience and good knowledge of French.

They should also have a postgraduate teaching qualification and experience of working in a British university.

Salary : £5,661 to £7,707 pa.

Benefits : Overseas and children's allowances ; free furnished accommodation. Two year KELT contract.
78 TU 89

INSPECTOR OF ENGLISH

(OMAN)

Ministry of Education, Batinah Coast. To inspect schools, organise in-service training and assist with materials production.
Qualifications : Candidates, men only, aged 30-50 must have a postgraduate qualification in TEFL and TEFL experience preferably in inspecting or teacher training.
Salary : £5,000 to £6,129 pa plus 10 per cent inducement allowance.
Benefits : Free furnished accommodation with free electricity and water ; overseas and children's allowances ; employer's portion of superannuation contribution. Two year KELT contract, renewable.
78 WE 7

HEAD OF ENGLISH DEPARTMENT

(YEMEN)

National Institute of Public Administration, Taiz. To teach English up to Cambridge 1st Certificate level to mainly Government employees.
Qualifications : Candidates, men only, must have a British educational background, postgraduate TEFL qualification and five years' teaching experience.
Salary : £5,000 to £6,129 pa plus 10 per cent inducement allowance.
Benefits : Free furnished accommodation with free water and electricity : overseas and children's allowances ; employer's portion of superannuation contribution ; two year KELT contract, renewable.
78 WO 166

TWO PROFESSORS/ASSOCIATE PROFESSORS/ ASSISTANT PROFESSORS FOR SOCIAL WORK PROGRAMME

(IRAN)

Faculty of Education and Psychology, Jundi Shapur University, Ahwaz. To plan a new Masters Degree programme in Social Work, including entrance examination and bibliography preparation, supervision of practical work, teaching new course, research and advisory work for the local community with whom close cooperation is encouraged.
Candidates, preferably aged 30-55, should have relevant PhD or degree plus relevant professional qualification and at least three years' relevant experience.
Salary : £10,000 to £13,400 pa (approx).
Benefits : Housing allowance or University furnished accommodation ; return air fares for appointee and family ; baggage allowance. One year contract, renewable.
78 HU 104-105

ELT MATERIALS DEVELOPER

(YUGOSLAVIA)

Language Centre Creative Learning Project, Zagreb. To set up new project. Required for September or soon after.
Candidates must be UK citizens with a degree from a British university and have a wide knowledge of applied linguistics, experience with young people and relevant experience in material design. Male candidates preferred.
Salary : £5,000 to £6,129 (tax-free) according to qualifications and experience.
Benefits : Overseas accommodation and children's allowances; free travel; employer's contribution to superannuation : free medical treatment. Two-year Formula contract, renewable.
78 UO 167

LECTURER IN ENGLISH LANGUAGE

(ROMANIA)

Institute of Higher Education, Bacau.
Candidates should be British Nationals, preferably single, with a degree in English or Modern Languages from a university in Britain and relevant TEFL experience. A formal TEFL qualification is desirable.
Salary : 42,000 Lei pa tax free (approx £1,843) paid in 10 monthly instalments plus sterling subsidy of £2,030 pa paid in Britain.
Benefits : Free accommodation. One year contract, renewable.
78 UU 82

Return fares are paid. Local contracts are guaranteed by the British Council. Please write briefly stating qualifications and length of appropriate experience, quoting relevant reference number and title of post, for further details and application form to The British Council, 65 Davies Street, London W1Y 2AA.

THE BRITISH COUNCIL

Overseas

AUSTRALIA

DISTANCE EDUCATION

Warrnambool Institute of Advanced Education, a regional College of Advanced Education on Victoria's south coast, seeks an experienced person for its vigorous and expanding External Studies program. In 1978 over 600 students are pursuing a wide range of external subjects in Business Studies, Social Science, Teacher Education and Municipal Engineering.

Lecturer/Senior Lecturer in Methods of Distance Education

Salary Range;
A$15,179 – $19,939 Lecturer
A$20,368 – $23,738 Senior Lecturer,
according to qualifications and experience

The appointee will work closely with teaching teams and individuals in the development of external courses, assist in the evaluation of such courses and participate in relevant research projects and conduct seminars and workshops in methods of Distance Education.

Applicants should preferably hold a Higher Degree, be committed to the concept of Distance Education and be aware of the needs, interests and problems of the adult learner. They should be able to demonstrate a concern for external students, a history of successful experience in Instructional Design (including A/V media) as applied to external study materials at post secondary level, and possess the ability and willingness to co-operate with academic staff in the preparation of such materials.

Appointment will be for three years in the first instance, with possibility of subsequent permanent appointment.

Further information concerning the position or conditions of appointment, including removal expenses, may be obtained from the Staffing Officer.

Applications close
Monday 2 October, 1978. Typewritten applications stating qualifications, experience, and giving sufficient information to indicate suitability for interview, together with the names and addresses of three referees should be sent by airmail to the Staffing Officer, Box 423, Warrnambool, Victoria 3280, Australia.
(Mark envelope Staffing/Confidential)

Warrnambool Institute of Advanced Education.

AUSTRALIA
ROYAL MELBOURNE INSTITUTE OF TECHNOLOGY LIMITED

SENIOR LECTURER IN INDUSTRIAL DESIGN
DEPARTMENT OF DESIGN

A position as senior lecturer in charge of the undergraduate and post graduate programmes in Industrial Design has become vacant in the Department of Design, which offers courses in Fashion, Textiles, Graphic and Jewellery Design as well as Industrial Design.

Applicants should have a breadth of design experience, possess relevant tertiary qualifications and be experienced in teaching design in a tertiary institution.

Salary within the range A$20,366 – A$23,738 p.a.

Ref. No. 152/02/AN Closing date 31/10/78

Intending applicants should obtain a Schedule of duties from the Staff Branch, RMIT, Box 2476V, G.P.O. Melbourne 3001. Applications should be addressed to the Registrar.

General Vacancies

TRAINING LECTURER

Have you a teaching qualification?
Have you gained some teaching experience?
Are you under 30 and interested in a challenging career in computing?

CAP Limited is a fast growing computer consultancy recruiting over 125 trainee programmers each year and we need your help in training them. There are also other opportunities for future involvement in various technical training areas for our established staff. Computing experience would be useful but is not essential as training will be given.

You will work in our new Training Centre in Richmond, Surrey. A salary of up to £5,000 is offered plus relocation assistance if appropriate.

Telephone Will Morrish on 01-242 0021 for an application form.

CAP LIMITED
CAP House, 14/15 Grent James Street, London WC1

Don's diary

Wednesday

An unconventional day of the week to start a diary, but I've just settled into my new routine. Breakfast in the buffet of the Academy's hotel, then go to work like any Muscovite—by Metro and on foot through pleasantly leafy streets. Buy oranges at a wayside stall; get to the Archive by 9.30. The heavily sprung doors shut with a resounding clang behind me; the policeman on duty nods me through and I climb the stairs to the foreigners' reading room.

Apart from a chair with protruding nails this would earn a star for comfort in any Michelin guide to archives. It is clean, airy and uncrowded; telephone calls and tea are free. The work is absorbing: my seventeenth century Tsar thinks ruminously and makes interesting doodles. Nevertheless I retire periodically to smoke, eat oranges and to reflect, only the smoking area is too social for much reflection. Meet a friendly Viennese and then a Soviet historian whose work I know. Exchange notes on personalities and research in progress East and West.

Move on to the Lenin Library as at 5.30. Its windows are set too high to catch the view of the Kremlin, but there's a profusion of indoor plants on which to rest my tiring eyes. Home late to a meal in the buffet and a briefing on demographic trends in Turkey by a companionable professor from Columbia. The implications sound alarming.

Thursday

Sleep little, though not because of the Turks. Trams clunk their way past for most of the night, and the curtains reflect the Soviet textiles shortage, covering only two thirds of the window and letting in the light.

Spend the afternoon at the institute consulting members of my "seethe". The meetings are held in a general office with the distractions of ringing telephones and the buzz of other conversations. But my guide here, Liudmilla, lessens the strain with good briefings, timely reminders, and a sense of humour. Have long discussion over tea with the Head of the Sector, who has a room to himself.

I agree to read a paper next Tuesday, again raise the question of a visit to Leningrad, so far denied me, and make the customary presentation. Realise that my stock of books and offprints is running dangerously low and that I shall have to be meaner in future. Embarrassing in view of the piles of printed stuff that I am receiving.

Dine in the hotel restaurant, sharing a table with three blue-rinsed Russian matrons. They are drinking champagne and try in vain to press some of it upon me before returning to their conversation. This consists largely of put-downs with reference to the superiority of their country cottages and their holidays in the Crimea. The band strikes up loudly and there is a general movement towards the dancefloor. But I concentrate hard on my soup and they don't ask me to dance.

Wash clothes, write home and sort through my notes. Our cultural attaché rings to ask me to lunch on Saturday; then Liudmilla to say that I am to go to Leningrad next Tuesday night. Sleep a sleep of contentment.

Friday

Order microfilm at the Archive. Told that I must pay—and that they have no machinery for accepting money from me. Catch 22. But the reading-room superintendent regards the problem as a challenge to her ability to work the system. After hours on the telephone she produces a solution baroque in its complications and involving many intermediaries, but I'm assured it will work.

Take a mid-day stroll towards a nearby monastery with loud-grey and golden domes, then join a democratic queue of children, old women and army generals for a twopenny glass of kvass. Observe more serious drinking later in the hotel buffet when two drunks (academics?) seen buying bottles of brandy at breakfast, roll back for more. They try to kiss the plump and pleasant girl behind the bar. She sees them off with good humour, but at least they get their brandy.

Saturday

Make an unexpected find in the Lenin Library which sets me up for the cultural attaché's lunch. This is jolly, with good company and good wine, besides which it's a relief to speak English again. Much coming and going. Someone arrives late, hot-foot from Siberia; some leave early for other distant destinations. Host and hostess remain unperturbed. Vfrah Neuman, the violinist and judge at the Tchaikovsky Competition, is there. When I tell him I'm learning the bassoon he promises to introduce me to the great Birnstingl. I am awed.

Walk back to the Library and afterwards through Red Square and round the Kremlin, my shoes holding out remarkably well. Then home to drink whiskey with my friend from Columbia.

Sunday

The Academy lays on a free trip to the Trinity-St Sergius Monastery at Zagorsk. When we arrive a kindly Russian scientist volunteers to act as guide, but it transpires that, like the rest of us, he's never been here before, and with the group moving at funereal pace I slip away, trusting to my eye and to Baedeker. Dive into the crowd milling round the door to one church.



Hustle and bustle in downtown Moscow.

Only the very old are being admitted, but my passport gains me entry.

Inside, I enter another world. A dense throng of pilgrims bearing candles and intoning hymns carries me slowly towards the shrine of St Sergius. He is encased in massive silver and attended by two priests, one of whom holds out a cross for the faithful to kiss. . . .

Buy a delightful print of the place in the kiosk, wander through the museums, and make a tour of the remaining buildings. The Trinity Cathedral is closed until Vespers, but I waylay a priest who amiably agrees to show me round. He recalls other British visitors including Princess Anne (whom he has mistaken for the Queen), but declines the offering I make on parting.

We break the homeward journey for a walk in the woods, though only six of us avail ourselves of this opportunity, the rest remaining grimly in their seats. Dine with a West German economist who was active in the radical students' movement of the 1960s. He's lost his confidence in man's ability to control the mysterious forces which rule society, but retains a refreshingly strong and attractive moral sense.

Monday

Cloudburst. Moscow resembles Venice in winter as crowds wait for planks to be laid across a flooded street. Even so I get my feet wet. This gives me a strong sense of fellow-feeling for the drenched soldiers at a [illegible] years ago, subject as a [illegible] I'm reading. I advise my [illegible] universal Russian remedy, resolve to buy some vodka.

Meet Liudmilla and [illegible] paper I'm to give tomorrow, briefs me on protocol and [illegible] sister which ideas [illegible] might find familiar [illegible] strange. Suddenly remember [illegible] haven't eaten since breakfast. Lacking both the patience and stomach of a Russian, [illegible] her bus. Spend the rest of the evening drafting, drink vodka and read till two.

Tuesday

Wake up with a fierce cold; nevertheless, spend a useful morning obtain a dispensation to work in the Archive on Friday when libraries have monthly cleaning. Which (except perhaps in Italy) are so ready to bend rules?

Arrive late at the [illegible] still with 20 minutes to spare [illegible] the meeting. Spend it talking to a spry 86-year-old typist who [illegible] has a surplus which can provide generously for universities and colleges. The developing world has other such urgent priorities of national development that there is often little—too little—left for the development of higher education particularly in its less utilitarian university forms.

Certainly the disparity is more painful: the countries of the world pretend to have little in common: the universities of the world share a common heritage and have common aspirations. So the gap between the rhetoric of an international community of learning and the reality of gross inequality is all the wider.

African and Asian university leaders who attended last month's Commonwealth Universities Congress in Vancouver were keenly conscious of this gap between rhetoric and reality. Perhaps their consciousness was considerably raised by the fact that the congress was taking place at the oldest and largest university in the richest province of the Commonwealth's richest nation. Many of them felt that something was out of balance when the University of British Columbia could spend $6m on an "aquatic centre" while the struggling universities of the small states of central and southern Africa regarded even a new photo-copier as an important acquisition.

Yet this concern never managed to break through to the surface. Instead it was a powerful undercurrent of opinion, remarked on in receptions and in corridors but not stated explicitly during actual sessions. Part of the reason for this discretion was politeness. After all, no one wished to begrudge UBC their splendid facilities. But part was a more important failure to come up with any practical suggestions about how rich universities could help poor ones. There was much talk, particularly among the Africans, of the need for an "initiative", but no one seemed to be able to be more precise.

This is hardly surprising. The obstacles to universities in the developed world giving anything but rhetorical support to those in the "Third World" are very great. The first one is that the former do not always recognize themselves as rich. Even if spare resources can be found there are always more clamourous constituencies much closer to home who will demand them. Even if a European or North American university did decide to give regular aid to a poorer fellow institution in Africa or Asia, the most likely result would be for its paymaster government to reduce its own grant accordingly.

In the "Third World" the difficulties are just as great. There, national governments may decide, quite correctly, that primary education or irrigation are more worthy recipients if outside aid is available. They may also disapprove of closer links between rich and poor universities as a potential interference with their own duty to set national priorities or even as a form of "academic colonialism".

Yet for universities to allow those obstacles to daunt them would be to acquiesce in the too long established tendency for universities everywhere to become more nationally minded and even parochial in their concerns. If nothing more positive is done to reaffirm the existence of an international university community by providing badly needed help to the poorer universities of Africa, Asia, and Latin America, then the so-called international dimension of the universities will shrivel into something of the significance and morality of the exchanges described by Arthur Koestler in *The Call Girls*.

There are many possibilities. Universities could be "twinned" as towns are. Staff could be loaned by the rich to the poor. The sad truth is that if half the time and energy that has gone into supporting the interests of overseas students in Britain (a worthy but narrow cause tainted with just a little selfishness) had gone into this grander design we would not be at such a loss for ideas.

Third World university needs

The disparity between universities in the rich developed world and those in the poor "Third World" is at least as great as that between the nations that support them. Indeed it may even be greater because the promotion of higher education may still be a bench mark of political achievement in the former but in the latter a luxury that can hardly be afforded.

The developed world—even in these austere years of inflation, unemployment, and low growth—still has a surplus which can provide generously for universities and colleges. The developing world has other such urgent priorities of national development that there is often little—too little—left for the development of higher education particularly in its less utilitarian university forms.

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Lessons of Teesside collapse

The report on Teesside Polytechnic by the Council for National Academic Awards marks one of the most disturbing episodes in the recent history of higher education. A major institution running a score of postgraduate as well as undergraduate degrees has been brought to the brink of collapse as the result of a failure of internal management and inadequate support from its maintaining local authority, Cleveland County Council. Should the CNAA feel compelled to enact its threat to withdraw recognition of the polytechnic by the end of the 1978-80 academic year, the consequences for staff and students, and for the citizens of Cleveland, will be grave indeed.

What gives the situation both hope and added poignancy is that the polytechnic has been brought to the present state of affairs in spite of the possession of a competent and in many cases dedicated teaching staff. The CNAA report reiterates time and again that in many areas of work, such as the library and the computer centre, complete collapse has been avoided only as a result of the determined efforts of staff working in conditions verging on the intolerable. The failures of the institution have been managerial, and on a deeper level political, rather than academic.

The presence of sound and committed academic staff does give some cause for hope that the polytechnic will be able to make the "substantial progress" demanded by the CNAA. But it is impossible to be certain that sufficient progress will be made in the short time available. Relations with the local authority appear to be based on mutual dislike and incomprehension; internally the institution appears to lack identity, leadership and, indeed, any effective machinery for debating and acting on the CNAA's report.

In these circumstances it is impossible to escape the conclusion that outside intervention will be necessary to salvage the polytechnic, however galling that might be to Cleveland and the institution's present directorate. Cleveland is the biggest conurbation in Europe without a university, and the amount of political or personal embarrassment can be allowed to stand in the way of the survival of its only major institution of higher education.

The Council of Local Education Authorities ought to dispatch its "fire brigade"—the Further Education Advisory Team—to Cleveland to restore a decent relationship between the county and the polytechnic. Through the CNAA senior academics should be made available to guide the polytechnic out of its predicament.

In the long run, however, it is through its own staff that Teesside Polytechnic must ensure its future. The real failure of the polytechnic is that it has not established a community of academics with a corporate identity and with sound machinery for democratic decision making. Polytechnic directors are wont to be critical of over-elaborate and "inefficient" committee structures. The lesson from Teesside is that efficiency will never be achieved where academics are denied a proper role in the running of their own community.

Bakke means civil rights stage two



Steven Muller

The United States Supreme Court rendered its decision in the Bakke case on June 28, and Clive Cookson reported the judgment in *The THES* on June 30, and the immediate repercussions on July 3. I withheld comment, although it was tempting to point out that the court rescued precisely "the most narrowly restricted verdict possible" of which I wrote in my first column in this space last November, and did so on the grounds I then efforced as an example of the least disruptive decision.

Now, in the longer aftermath of the Bakke case, it may be useful to attempt some comments on the painfully vexed status of race relations in American higher education. The subject is not only painful but tender, and the effort to be candid is all too likely to offend those whose emotions are deeply engaged.

As I also forecast last November, the court's narrow judgment in Bakke did disappoint those on both sides of the argument who wished a full and final decision on the limits of affirmative action. In essence the ruling in Bakke changed nothing. That satisfies a majority of Americans who feared that another court-ordered change in race relations at this time would have explosive consequences. It frustrates particularly those black Americans who are pushing for major new advances for black people in society. Bakke confirms the status quo.

The good news for black Americans is that the court did not take a step backward; the bad news appears to be that no forward step was taken, although in fact such a forward step by the court might well have produced adverse results.

To understand the fundamental impasse in race relations which Bakke so neatly confirmed and did not resolve, one must realize that the civil rights movement to which Martin Luther King gave so much leadership two decades ago has now reached a crucial third stage.

In the first stage the issue was whether blacks would continue to be excluded from social privileges reserved for whites. The symbol was the "whites only" lunch counter in the American South. Over this issue there was an absolute triumph, to the point that the issue is now dead. Not only by law, but today also by overwhelming popular consensus, black Americans are no longer treated from any aspect or activity in society.

The second stage of the civil rights movement was based on the insistence that it was not enough simply no longer to exclude blacks, but that their right to participate needed to be visibly and palpably asserted on a continuing basis. To use the homely original example of the lunch counter, this second stage mandated that blacks not only *could* enter but had to be among the customers whenever the lunch counter was open. A number of problems developed with this stage which are still unresolved. While it may seem a bit clumsy to continue with the lunch counter as the illustration, it seems simplest and clearest to do so.

One problem is that whites assumed that blacks would simply become part of the mix of customers, while it has generally turned out to be the preference of blacks to sit together separately. White insistence on a separate black section has not been asserted and would have provoked conflict. But black separateness is generally manifest by black demand; and ironically many whites find it offensive.

A second problem—sticking with the example—is that it takes money to be a customer, which raises the metaphorical question of whether it is necessary to provide the financial means to Blacks to assure that some of them would always be among the customers.

A third problem is that the Black civil rights movement inspired imitation by other minorities—so that the lunch counter now must accommodate not only Black and White, but Americans of Spanish descent, American Indians, Americans of Oriental descent, the handicapped, still other minorities—and of course women. Among so many claimants of rights once denied, the Black claim is no longer unique nor even the obviously most prominent.

Still, it is worth noting that White majority—or should one now say White male minority—resistance did not initially constitute a serious problem at this stage. Within the Black community an issue developed as a result of the gap that opened between those who could afford to eat lunch at the counter and those who could not—an issue closely linked to the perceived need of those Blacks at the counter to sit together as a separate Black presence.

These problems all involve continuing difficulties which have been aggravated at the level of a third stage of the civil rights movement. The first two stages both assumed that there was lots of room at the lunch counter, and that the question of a more inclusive clientele could be solved by additions to the customers. At the third stage, the counter is full, and the assertion is that some Whites must leave without being served so that there will be room for some Blacks.

At this point, White resistance is unquestionably a major problem. White Americans in overwhelming numbers are now fully prepared to share society with Blacks in principle and to interact with a constant Black presence, but they are not ready to see Whites deprived because they are White so that Blacks may advance because they are Black. And, of course, the more militant Black leadership maintains that until precisely this is achieved Black social advancement in America remains an illusion, that White liberalism in racial matters is a fraud, and that White racist dominance remains a fact.

The intractable truth is that at this current third stage of the recent evolution of race relations in the United States the issues are now widely perceived as part of a zero-sum game: "I win: you lose." The stakes have been raised beyond preference (prejudice) and inconvenience (school busing) to genuine sacrifice.

This is why Bakke was such a very hot case. Medical school admissions are all too much perceived in any case as a zero-sum game, and the case turned on whether a White student could be denied a place so that a Black student could have one—not on the basis of academic merit, but because one was White, the other Black. And [illegible] the court decided so narrowly [illegible] with so many separate opinions [illegible] —in the terms I am putting here—to affirm the second stage (yes, we may make a special effort to secure a constant Black participating presence) and to reject the third stage (no, you may not explicitly deny White place for the sake of a Black one).

Where then are we after Bakke? I am white, so my objectivity in these matters is compromised, but for what they may be worth it seems to me that to conceive race relations in terms of a zero-sum game is disastrous. I can understand the tendency to do so at a time when jobs are relatively scarce and opportunities appear to depend upon, but I profoundly believe that to be wrong. Not only is the attitude of "I win; you lose" bound to rekindle racial conflict, but it will not help to create more jobs, nor improved opportunities.

Unemployment among young people is a problem that must be solved for the sake of a healthy society whether the young unemployed are black or white. Improved opportunity for citizens is a social good regardless of race or sex. The argument that black advancement depends upon white disadvancement therefore strikes me as wrong in fact and evil in its consequences.

To return once more to the overly simple example of the lunch counter, I hope for the day when everyone feels welcome there and when the racial mix among customers is no issue. And if it is not possible to enlarge the place to seat all comers, then first-come, first-served still strikes me as fair. As for higher education, there is surely more to be gained by preserving more black American[illegible] to compete effectively for available places than to press for the quota system against which the Supreme Court ruled in the Bakke case.

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LETTERS TO THE EDITOR

Research career structure

Sir,—In your leading article "Research career structures" (*THES*, August 25), you expressed concern that both the universities and the research councils might be deterred from offering further research posts if the AUT executive's proposal for offering permanent posts to university research staff of at least six years' standing is adopted. This fear seems to us to be misconceived.

Surely the real issue is that the Government and the DES should take joint responsibility, *now*, for providing sufficient additional funds to ensure that all those university researchers, who do not at present have permanent posts, but who are fully qualified for such posts and whose work is considered to be of high enough standard, are provided with security of tenure and adequate career prospects forthwith? It is unfortunate that the AUT executive did not explicitly mention this responsibility in its document, and we urge AUT to affirm immediately its belief that both the Government and the DES should accept this obligation.

One of us suggested in a previous letter (*THES*, August 26, 1977) several ways in which the Government could provide the extra funds needed for this purpose. All that is needed is their agreement to give adequate priority to the universities.

This is undoubtedly a matter of great urgency. In his article Tenure in the UK (*THES*, August, 1978), the AUT General Secretary Laurie Sapper estimated that over 10,000 graduates are employed in academic research posts, mostly untenured, in British universities. He also estimated that the number of registered unemployed among graduates of this sort had risen from over 800 to over 1,800 during the past year or so.

In view of the forthcoming General Election, we urge all readers of *The THES* to ask their parliamentary candidates what attitudes they take to this vital question.

Yours sincerely,
ALAN MAYNE (Research Fellow),
JUNE SUTOR (Senior Research Fellow),
University College London.

Sir,—The AUT's proposals for reforming the career structure of research staff are a welcome sign that the AUT is belatedly paying attention to the conditions of those university staff not employed on the lecturer grade and above. These proposals deserve a far more sympathetic and better informed reception than that given in your editorial "Research career structure" (*THES*, August 25).

The possibility mentioned there that a few graduates who wish to test the waters of university life without yet being committed to a university career might suffer from an unwillingness on the part of universities and research foundations to employ them for fear of having to give them permanent posts after six years is surely a small price to pay for improving the conditions of the majority of research staff.

I would have supposed it quite likely that the majority is prepared to relinquish the privilege of "a degree of insecurity". After all, what could be more dispiriting than the knowledge that, however well you do your job, your appointment cannot be renewed? But if the present system of short-term contracts is indeed satisfactory, why have university administrators been so tardy in adopting it for themselves?

There is another point which deserves to be raised (not least because it has not, to the best of my knowledge, been raised in your columns previously). Short-term contracts cause not only academic discouragement and domestic upheaval but also considerable removal expenses. Research staff on short-term contracts probably *have to* move more often during their careers than other categories of university staff. Yet universities are notoriously tight-fisted in paying removal expenses.

In industry and the Civil Service, by contrast, such expenses are far more generous and usually cover the bulk of the actual costs incurred, with allowances being paid not only for actual removal of effects but also for legal and estate agents' fees, mortgage difference, temporary accommodation, disturbance and sometimes even redecoration.

If, in the immediate future, universities cannot bring themselves to contemplate the expense of implementing the changes proposed by the AUT, they should at least take urgent action to bring the allowances paid for removal more into line with actual costs.

Yours faithfully,
DR. RICHARD WALSH
International Medieval
Bibliography European Office,
The University of Leeds.

Just rewards?

Sir,—For many years I have acted as external examiner in mathematics for BSc degrees in various United Kingdom universities. This year a senior lecturer colleague in my department acted as external examiner in mathematics for the CNAA degree in a certain United Kingdom polytechnic. Our work was on the same academic level, so we were able to compare notes.

I was responsible for three courses involving eight papers with 69 scripts, and attended three examiners' meetings over two days. My colleague was responsible for three courses involving 16 papers with 77 scripts and six projects, and attended two examiners' meetings over two days. For my work I was awarded fees amounting to £101, while my colleague was awarded £520.

We find this remarkable! Does this mean that responsibility for CNAA degrees is several times heavier than for BSc honours degrees, that academic expertise and experience valued financially for external examining is much greater for CNAA degrees than for BSc university degrees? Is this divergence of financial reward similar for all subjects and for all university/polytechnics?

Is there anyone who can enlighten us on this extraordinary discrepancy in reward, since the total difference mounts up when several years are taken into account?

Yours faithfully,
JOHN HEADING,
Professor of applied mathematics,
University College of Wales,
Aberystwyth.

SA business schools

Sir,—I wish to point out that there were a number of errors in Martin Feinstein's article (*THES*, July 14).

In the first place the Business School of the University of the Witwatersrand is the third biggest in South Africa. There are six business schools in South Africa, of which the School of Business Leadership of the University of South Africa is the biggest with 172 graduates for 1976 and 1977, followed by Cape Town with 117 and then the University of the Witwatersrand with 105. The total for South Africa for the two years is 545 MBL and MBA graduates.

Secondly, their new course in part-time business administration is not the first in South Africa because the University of Pretoria started more than 20 years ago with a part-time programme, followed by Cape Town, Stellenbosch and Potchefstroom about 12 years ago.

G. MARAIS,
Director,
School of Business Leadership,
University of South Africa.

UK philosophy criticized

Sir, — It's hard to decide what to say in response to Peter Gibbins's article about American philosophy (*THES* August 4). Mr Gibbins has the trick of saying things that are, in Stephen Potter's words, so absolutely inappropriate, on five levels simultaneously, that it seems hopeless even to try to answer back. Moreover, it would probably be a waste of my time to dispute the conclusions of Mr Gibbins's offensive pop-sociological study of the American university in your columns. I have the impression (am I wrong?) that these conclusions are what the British reader expects to hear, enjoys hearing, and is going to believe in any case.

However this may be, there is one important fact about British and American philosophy that your readers who are not philosophers may be unaware of, and which they could hardly be expected to deduce from Mr Gibbins's article: American philosophy is very good indeed and British philosophy is rarely more than interesting.

If all the best contemporary British philosophers—say, Ayer, Strawson, Anscombe, Geach, Kenny, Mackie, Dummett, and Wiggins—were suddenly to perish in some natural disaster, we should all be very sad but we should not spend much time lamenting books unwritten or the theories that might have been. (Despite his knighthood, I cannot consider Popper a British philosopher.) If, on the other hand, any one of the great contemporary American philosophers—say, Quine, Davidson, Putnam, or Kripke—were to die today, philosophy would suffer a loss whose magnitude it would be difficult to exaggerate.

Moreover, the excellence of American philosophy is not yet simply the product of the work of a handful of "great men". There are at least 10 American philosophers, who, if they have not yet produced work as widely admired as that of Quine and Kripke, are nevertheless philosophers superior to any contemporary British philosopher. (David Lewis is a reasonably uncontroversial example of a philosopher in this category.)

There is in fact only one respect in which British philosophy is superior to American philosophy. In Britain the percentage of philosophers who are embarrassments to the profession is very low, nearly zero; in America it is very high (I should think between 30 and 40 per cent). But this is a minor defect. While there are in America thousands of teachers of philosophy who in a perfect world would not be allowed to teach, philosophy, do no great harm, for they almost invariably teach at institutions at which the students are so dull as to be incapable of being affected in any way by what their teachers say or do. The rest of us can ignore them.

I do not think this single advantage of British over American philosophy outweighs its great disadvantage: its inability to produce anything absolutely first-rate. I wonder whether Mr Gibbins can explain this inability sociologically?

Yours sincerely,
PETER VAN INWAGEN,
Associate professor,
Department of philosophy,
Syracuse University.

The Wordsworth letters

Sir,—May I be permitted to clarify just one point in your reviewer's generous notice on August 11 of my new edition of *The Letters of William and Dorothy Wordsworth: The Later Years*, Part 1?

It is quite true that the remarkable collection of Wordsworth letters which was sold at Sotheby's last year and subsequently acquired by Dove Cottage at Grasmere, came to light after earlier volumes in the series had been launched. But I would like to assure all students of Wordsworth that all the newly discovered letters will eventually be incorporated into the edition.

Those belonging to the later period will be included in their proper chronological position in the remaining volumes of *The Later Years*, while those from the middle period will appear in a supplementary volume to the two volumes of *The Middle Years* which were published in 1969-70.

Yours faithfully,
ALAN G. HILL,
Department of English,
The University, Dundee.

Letters for publication should arrive by Tuesday morning at the latest. They should be as short as possible, and the editor reserves the right to cut or amend them if necessary.